

**Author: Anderson, Clarence Scott**

**Title: An analysis of certain pre-employment records and  
activities of candidates for teaching vocational  
agriculture**

**Place of Publication:**

**Copyright Date: 1933**

**Master Negative Storage Number: MNS# PSt SNPaAg027.9**

<383188> \* \*OCLC\* Form:manuscript item 2 Input:KAP Edit:FMD  
 008 ENT: 971013 TYP: s DT1: 1933 DT2: LAN: eng  
 035 (OCoLC)37765556  
 037 PSt SNPaAg027.9 \$bPreservation Office, The Pennsylvania State  
 University, Pattee Library, University Park, PA 16802-1805  
 090 00 S534.P4 \$bA53 1933 \$cpn\*10326916  
 090 20 Microfilm D244 reel 27.9 \$cmc+(service copy, print master, archival  
 master)  
 100 1 Anderson, Clarence Scott \$d1892-1982.  
 245 13 An analysis of certain pre-employment records and activities of  
 candidates for teaching vocational agriculture \$ba study of three  
 hundred men prepared at the Pennsylvania State College \$cby Clarence  
 Scott Anderson.  
 260 \$c1933.  
 300 130, [7] leaves \$c28 cm.  
 500 Vita.  
 502 Thesis (Ph.D.)--Cornell University.  
 504 Bibliography: leaves [136]-[137].  
 533 Microfilm \$bUniversity Park, Pa. : \$cPennsylvania State University  
 \$d1997. \$e1 microfilm reel ; 35 mm. \$f(USAIN state and local literature  
 preservation project. Pennsylvania) \$f(Pennsylvania agricultural  
 literature on microfilm).  
 590 This item is temporarily out of the library during the filming process.  
 If you wish to be notified when it returns, please fill out a Personal  
 Reserve slip. The slips are available in the Rare Books Room, in the  
 Microforms Room, and at the Circulation desk.  
 590 Archival master stored at National Agricultural Library, Beltsville, MD  
 : print master stored at remote facility.  
 610 20 Pennsylvania State College. \$bSchool of Agriculture.  
 650 0 Agriculture teachers \$zPennsylvania.  
 650 0 Teachers' backgrounds \$zPennsylvania.  
 650 0 Agricultural education \$zPennsylvania.  
 830 0 USAIN state and local literature preservation project. \$pPennsylvania.  
 830 0 Pennsylvania agricultural literature on microfilm.

AN ANALYSIS OF CERTAIN PRE-EMPLOYMENT RECORDS  
AND ACTIVITIES OF CANDIDATES FOR TEACHING  
VOCATIONAL AGRICULTURE

---

A Study of Three Hundred Men Prepared at The  
Pennsylvania state college

---

A THESIS

Presented to the faculty of  
The Graduate School of Cornell University

In Partial Fulfillment of  
The Requirements for the Degree of

DOCTOR OF PHILOSOPHY

By

CLARENCE SCOTT ANDERSON

September, 1933

RECEIVED  
OCT 1 1933



# TABLE OF CONTENTS

Chapter		Page
I	INTRODUCTION . . . . .	1
	Purpose . . . . .	1
	Scope of Investigation and Sources of Data . . . . .	2
	Method Employed . . . . .	6
	Summary . . . . .	13
II	COLLEGE PREPARATORY EDUCATION . . . . .	15
	Elementary school Attendance . . . . .	15
	Secondary school Attendance . . . . .	16
	Extent to which Graduates studied Vocational Agriculture When Attending High School . . . . .	19
	High School Index Numbers . . . . .	23
	Summary . . . . .	29
III	FARM EXPERIENCE . . . . .	31
	Farms Reared Graduates . . . . .	33
	Size of Farms . . . . .	37
	Major Farm Enterprises . . . . .	38
	Summers on Farms While Attending College . . . . .	42
	Operation of a Farm Prior to Teaching . . . . .	43
	Summary . . . . .	47
IV	EXPRESSED ATTITUDES, DECISIONS AND INFLUENCES TOWARD TRAINING FOR TEACHING . . . . .	49
	Student's Personal Attitude Toward College Attendance . . . . .	49
	Parents' Attitude Toward College Attendance . . . . .	51



Chapter		Page
	The Occupation of the Parents . . . . .	52
	Time When Decision to Teach was Made . . . . .	55
	Summary . . . . .	58
V	GENERAL INTELLIGENCE OF THE GROUPS . . . . .	60
	Intelligence Scores . . . . .	62
	Intelligence Compared to Other Groups . . . . .	64
	Summary . . . . .	67
VI	PARTICIPATION IN EXTRA-CURRICULAR ACTIVITIES . . . . .	68
	Extra-Curricular Secondary School Activities . . . . .	68
	Extra-Curricular College Activities . . . . .	70
	Participation in College Athletics . . . . .	73
	Members of College Judging Teams . . . . .	75
	College Class Offices Held . . . . .	75
	Membership in Fraternities . . . . .	78
	Summary . . . . .	81
VII	COLLEGE EXPENSES . . . . .	83
	College Expenses of Agricultural Education Graduates . . . . .	83
	Receipt of Scholarship . . . . .	86
	Summary . . . . .	90
VIII	COLLEGE SCHOLASTIC ACHIEVEMENTS AND FAILURES . . . . .	92
	Grade Point Averages . . . . .	95
	College Honors . . . . .	99
	Scholastic Failures . . . . .	101
	Summary . . . . .	104

Chapter	Page
IX SALARIES AND SALARY INCREMENTS . . . . .	106
Teaching Experience and Salary Increments . . . . .	106
Pre-employment Background Factors Related to Salary and Increments . . .	108
Summary . . . . .	112
X TEACHER TRANSIENCY . . . . .	113
Teaching Experience and Teacher Transiency . . . . .	113
Pre-employment Background Factors Related to Teacher Transiency . . . .	116
Summary . . . . .	118
XI SUMMARY AND CONCLUSION . . . . .	119
Limitations . . . . .	119
Advantages . . . . .	120
Summary . . . . .	121
Conclusion . . . . .	125
APPENDICES . . . . .	130
Appendix A. Form Used in Requesting Data From Graduates	
Appendix B. Form Used in Recording Data From the Records of the College Registrar	
Appendix C. Letters of Communication	
Appendix D. Bibliography	



# LIST OF TABLES

Table		Page
I	Experience of Graduates in Teaching Vocational Agriculture . . . . .	4
II	Distribution of Individuals According to Year of College Graduation . . . . .	5
III	Elementary School Attendance . . . . .	16 & 17
IV	Secondary School Attendance . . . . .	20
V	Extent to which Graduates Have Studied Vocational Agriculture . . . . .	21
VI	High school Index Numbers . . . . .	25
VII	Farm Experience . . . . .	34
VIII	Expressed Major Enterprises on Home Farms . . . . .	39 & 40
IX	Relative Importance of Expressed Major Enterprises . . . . .	41
X	Extent to which 4 Summers Prior to College Graduation Were Spent on Farms . . . . .	44
XI	Operation of a Farm Prior to Teaching . . . . .	46
XII	Attitude Toward Attending College . . . . .	50
XIII	Father's Occupation . . . . .	53
XIV	Time When Decision Was Made to Teach Vocational Agriculture . . . . .	56
XV	Intelligence Scores Made When Attending College . . . . .	63
XVI	Intelligence Scores Made by Freshmen for Five Year Period . . . . .	65
XVII	Extra Curricular Secondary School Activities	69
XVIII	Extra Curricular College Activities . . . . .	71
XIX	Participation in College Athletics . . . . .	74
XX	Members of College Judging Teams . . . . .	76



Table		Page
XXI	College Class Offices Held . . . . .	77
XXII	Membership in Fraternities . . . . .	80
XXIII	Manner of Meeting College Expenses . . . . .	84
XXIV	Receipt of Scholarship . . . . .	88
XXV	College Grade Point Averages . . . . .	94
XXVI	College Honors . . . . .	100
XXVII	Scholarship Failures . . . . .	102
XXVIII	Average Salaries and Year Increments . . . . .	107
XXIX	Relation of Certain Pre-Employment Back- ground Factors to Salary Increments . . . . .	109
XXX	Experience and Transiency of Teachers of Vocational Agriculture . . . . .	114
XXXI	Relation of Certain Pre-Employment Back- ground Factors to Teacher Transiency . . . . .	115

#### ACKNOWLEDGMENTS

This study was conducted under the direction of a committee of which Professor R. H. Stewart, Department of Rural Education was Chairman. Other members of the committee were Professor E. A. Ferriss, Department of Rural Education and Professor R. B. Minneman, Department of Animal Husbandry.

### BIOGRAPHICAL SKETCH OF AUTHOR

Clarence Scott Anderson, son of James R. and Isabelle (Crose) Anderson, born February 15, 1892, Sterling, Illinois. Attended rural elementary school in Whiteside County; secondary school at Sterling, Illinois. Graduated with B S degree in Agriculture, with major in Animal Husbandry, from the University of Illinois, 1914.

was Associate Professor of Animal Husbandry at The Colorado State Agricultural College, 1914-1917. Served in the United States Army, 1917-1918. Received M S degree, The University of Illinois, 1924. Teacher trainer, Department of Agricultural Education, University of Illinois, 1923-1926. Graduate work also at Chicago University and Cornell University. Assumed present position as Associate Professor of Agricultural Education, The Pennsylvania State College, 1926.

Member of Tau Kappa Epsilon, Kappa Delta Pi, Phi Delta Kappa, Alpha Tau Alpha, American Vocational Association, American Legion and Masonic Lodge.

Married Ethel Florence Todd, February 16, 1918. Children, Clarence Scott Jr., born November 15, 1919 and Mary Elizabeth, born July 4, 1921.



## CHAPTER I

### INTRODUCTION

#### Purpose

The purpose of this research is to discover certain important pre-employment background factors which pertain to the teacher of vocational agriculture, relating these factors to length of teaching experience and other generally accepted measures of teaching success.

For approximately ten years following the inauguration of vocational agriculture in the curricula of secondary schools, the teacher training department at The Pennsylvania State College was concerned chiefly with the problem of training enough teachers of agriculture to supply the need. It was natural that during the period referred to a minimum of consideration was given to the background of fitness and experience possessed by students enrolling for training to become teachers of vocational agriculture.

The problem of teacher supply is no longer acute. Surpluses of teachers in the field prevail. Teacher trainers are confronted with a problem of selection and of guidance of young men applying for training. Furthermore, the indications are that in the future only the best qualified among the graduates will find employment.

It seems logical and feasible to approach the problem

by means of a study of the teachers already trained and at work, to look into their pre-employment activities and records, to discover if possible what type of men have been attracted to the training, have found employment as teachers, and have accumulated years of teaching experience in the field.

It is hoped that the data presented may assist those responsible for teacher training in vocational agriculture in directing and guiding the decisions of students who may be considering the curriculum of agricultural education in college. It may prove equally valuable to the student in helping him to analyse his experiences and past records in the light of what obtains among experienced teachers of vocational agriculture.

#### Scope of Investigation and Sources of Data

Since the establishment at The Pennsylvania State College of The Department of Rural Life, which later became known as The Department of Rural Education, four hundred and fifteen students have prepared through the curriculum in Agricultural Education to become teachers of vocational agriculture. It is this group of graduates whom the author endeavored to contact, securing from them data for the problem which are presented herein.

Information concerning the location of all graduates at present employed as agricultural teachers was available in the Department of Rural Education. The State Department of



Public Instruction at Harrisburg sent the addresses of many of them and still others were located with the aid of the alumni secretary of the college. Eleven were reported to be deceased. Authentic addresses were established for three hundred and eighty-five. Teachers of vocational agriculture working in Pennsylvania but not graduates of The Pennsylvania State College were not included.

Every graduate located was asked to supply data contributing to the problem. The data received were in turn supplemented by facts taken from the records of the college registrar for each person replying. When three hundred records had been received, the task of summarizing the data was begun. Less than ten late replies were received, consequently three hundred represents approximately the total number of cases available.

In Table I will be seen the distribution of the cases according to years of teaching experience. Table II shows the distribution according to the year of college graduation of the men replying. All years that are included appear reasonably well represented, although nearly one-sixth indicate graduation prior to the passage of the Smith-Hughes Act in 1917, which date also marks the establishment of the teacher training department at The Pennsylvania State College. Records show these older men as returning, some for an entire school year and others for summer sessions, for the sake of pursuing professional teaching courses. Nineteen hundred and



Table I. Experience of Graduates in Teaching Vocational Agriculture

Teaching Experience	0	1	2	3	4	5	6	7	8	9	10+	Summary
Number of graduates reporting	38	20	51	28	38	15	17	25	19	14	35	300
Per cent of total number of graduates reporting	12.7	6.6	17.0	9.3	12.7	5.0	5.6	8.4	6.3	4.6	11.7	100

Table II. Distribution of Individuals According to Year of College Graduation

Teaching Experience	Number of Graduates Reporting	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917 and earlier
0	38	2	3	2	2	3	3	2	4	2	3	4	2	3	3	0
1	20	4	2	0	0	1	0	1	3	1	1	2	3	0	1	1
2	51		10	5	4	3	3	4	4	4	1	1	2	4	1	5
3	23			8	5	0	0	1	0	4	2	1	2	0	1	4
4	38				11	3	3	1	1	3	1	1	4	1	1	8
5	15					6	0	1	1	0	0	1	0	0	1	5
6	17						6	5	1	0	3	0	0	0	0	2
7	25							16	1	2	2	0	0	1	0	3
8	19								9	2	0	2	1	2	0	3
9	14									8	1	1	1	3	0	0
10+	35										3	6	7	0	1	18
Summary Total	300	6	15	12	22	16	15	31	24	26	17	19	22	14	9	49
Per cent		2	5	5	7	5	5	10	8	9	6	6	7	5	3	16



thirty-one, the most recent date, has the smallest number of graduates. It was during this particular year that the teacher surplus was first felt and fewer graduates secured employment for 1931.

#### Method Employed

The questionnaire, a copy of which may be found in Appendix A, was tentatively prepared and submitted for trial to twenty teachers of agriculture. The County Supervisors of Vocational Agriculture were at that time in conference at the college and were used as the trial group.

The major considerations in the questionnaire dealt with elementary and secondary school training, farm and farming experience, decisions and influences affecting college attendance and curriculum choice, participation in high school and college extra-class activities and manner of meeting college expenses. Facts which could be equally well secured from the college registrar's records were omitted from the questionnaire.

As the questionnaire replies were received, continuing data were then sought through the office of the college registrar. The usual follow-up letters were sent to those delinquent in replying. Eighty and one-half per cent of those whose addresses were located replied to the questionnaire.

The data from the registrar's office pertained largely to grade point averages, course failures, college preparatory



schools with their index ratings, and the student's intelligence quotient. The form employed for recording these data may also be seen in Appendix B.

Case numbers were applied to records as completed and the data transferred to summary sheets. The cases were sorted according to years of teaching experience, ranging from the no-experience group to those having ten or more years of experience in teaching vocational agriculture. The experience range extended up to nineteen years. Each year between ten and nineteen was represented in the ten-plus group. It was not deemed consequential to indicate experience divisions beyond ten years.

Agriculture was taught on a vocational basis in a number of high schools of Pennsylvania before the passage of The Smith-Hughes Act, and several teachers who in the early years were employed in these schools are still teaching; their records tend to swell the ten-plus group. A number of these men show particularly long tenure, the longest being that of one man who has been employed nineteen years as a teacher of agriculture in the same school.

Length of teaching experience is accepted in this problem as one measure of a teacher's success. It is assumed that men who have taught vocational agriculture five to ten or more years are reasonably efficient and successful teachers. The work of the teacher of agriculture is carefully



supervised both locally and by state supervisors and inefficient teachers are not likely to receive the continued approval of those supervising them. Furthermore, the oncoming groups of newly trained teachers constitute an influence in the elimination of those least successful. Another and perhaps equally important justification for assuming that length of teaching experience is an indication of teaching success lies in the fact that many teachers themselves discover their own shortcomings and inabilities and tend to terminate their teaching tenures and teaching experience, to seek and find other forms of employment.

A bi-modal curve in length of experience in teaching vocational agriculture may be seen from the data of Table I. There is a tendency for those who teach at all to teach two years. This second year forms the first mode in the curve. The second mode occurs between four and five years, after which there is again a sharp drop. The average length of agriculture teaching experience for all teachers of vocational agriculture who have been employed in Pennsylvania was three and three-hundredths years in 1932. Stewart<sup>1</sup> in 1928, securing records from sixty-four employed Pennsylvania teachers of agriculture, found their average length of teaching experience to be three and four-tenths years.

---

<sup>1</sup> Stewart, K. M. Unpublished research conducted in The Department of Rural Education, Cornell University, Ithaca, New York, 1928.



In the last statistical summary of work in the states of the North Atlantic Region, the Federal Board for Vocational Education reported the average experience for Pennsylvania teachers of agriculture as three and six-tenths years. From these figures it may be assumed that teachers in their fourth year have reached the average in teaching experience for the state.

It would seem from modes in the curve that it requires more than one year for teachers of agriculture to become established in their work, but that after two years they are reappointed or find new positions on the basis of their teaching records; at this time there is marked elimination of the poorer teachers, of those who find teaching not to their liking, and perhaps some of those who have chosen teaching as a stepping-stone to other work.

As will be pointed out later in the thesis the largest salary increments occur during the third and fourth years of service and the average transiency<sup>1</sup> figure is reached during the fourth year of employment. These are both significant factors in affecting the curve of teaching experience for the fourth year. At this time men have taught slightly above the average length of time for all agricultural teachers of the

---

<sup>1</sup> Transiency is measured by the mean number of years of service rendered by teacher for all teaching positions.



state and they have had the greatest salary increment which they are likely to receive as teachers of vocational agriculture.

Four years of teaching has given many of them an opportunity to pay a part or all of their college debt. It should be noted here that sixty per cent of them borrowed a part or all of the money for their college education. Four years is ordinarily ample time for those who use teaching as a stepping stone to other occupations to accomplish their purpose.

Since eighty-two per cent of them were farm reared, a number of them doubtlessly had planned to farm. Four years of employment after college gave them a chance to accumulate some needed capital and to marry and to be better situated to enter upon the occupation of farming. The end of four years teaching experience is an ideal time for this change to take place. By this time the teachers in Pennsylvania have their permanent certificates, their salaries have become more or less static, and many who are ambitious for greater professional advancement naturally look to high school principalships and superintendencies.

an occupational survey<sup>1</sup> of one hundred and eight

---

<sup>1</sup> "A Survey of the Present Occupations of 108 Ex-Teachers of Vocational Agriculture. Graduates in the Agricultural Education Curriculum at The Pennsylvania State College." Unpublished research by the author.

ex-teachers of vocational agriculture, all graduates in the curriculum of agricultural education at The Pennsylvania State College indicated that thirty-three per cent were teaching subjects other than vocational agriculture, or were in school supervisory or administrative positions; twenty-one per cent were farming, or in occupations closely allied to farming; sixteen per cent were in agricultural extension work; eleven per cent were selling; five per cent were in research; two per cent were studying, and the remaining twelve per cent were distributed among a number of miscellaneous occupations, none of which attracted more than two per cent.

Teaching other subjects in the curriculum or filling supervisory or administrative school positions constituted the most frequent occupation of teachers of vocational agriculture who left the work. Farming ranked second and agricultural extension work attracted the third largest number.

These reasons in part explain the drop in the teaching experience curve after the fourth year. It should be the goal and ambition of teacher training departments and of those responsible for the administration of the vocational agriculture program of the state to sustain this curve, to hold successful and efficient teachers in the field and thus avoid the loss to the trainee, the institution which trains him and the community which affords him his experience. In referring to the secondary school program for vocational



education. Stewart and Getman<sup>1</sup> say that "the number of persons who continue in the vocation for which preparation has been received" is one of the measures of the effectiveness of the program. This same principle may be applied to the program for teacher training.

---

<sup>1</sup> Stewart, R. M., and Getman, A. K. "Teaching Agricultural Vocations," John Wiley and Sons, New York, 1930, p. 13.

Summary

In this research problem an attempt is made to develop a pre-employment pattern or background of conduct, experiences and records of graduates in Agricultural Education, and to determine if possible how these factors contribute to length of experience in teaching vocational agriculture.

Data obtained through a questionnaire and from the office of the registrar were secured for 300 of the 415 who have graduated to date in the curriculum of agricultural education at The Pennsylvania State College.

Graduates were placed in eleven experience groups ranging from no-experience to ten or more years of experience. The distribution of graduates per group ranged from 14 to 51.

Records of graduates from every college year dating back to "1917 and earlier" were secured.

The questionnaire dealt with elementary and secondary school training, farm and farming experiences, decisions and influences affecting college attendance and curriculum choice, participation in high school and college extra-class activities, parental occupation, and manner of meeting college expenses.

The data from the registrar's office dealt with grade point averages, course failures, college preparatory schools with index ratings, and the student's intelligence quotient.

Length of teaching experience is accepted in this problem



as one measure of teaching success and efficiency.

The average length of teaching experience in agriculture for teachers of this subject in Pennsylvania is between three and four years.

Two distinct modes occur in the teaching experience curve of graduates. The first drop is at the close of the second year of teaching and the second between the fourth and fifth years of teaching.

## CHAPTER II

## COLLEGE PREPARATORY EDUCATION

Believing that training basic to the preparation of becoming teachers of vocational agriculture begins earlier than with college courses, some inquiry was made as to the elementary and secondary schooling of agricultural education graduates. The kind of schools attended, the duration of attendance and the rating of the secondary schools attended were particularly noted. It is Wright<sup>1</sup> who says "The best foundation for the education of a successful teacher is laid in childhood."-----

Elementary School Attendance

The one-room rural elementary school holds a significant place in the early educational training of graduates in agricultural education and teachers of vocational agriculture. The data indicate that approximately two-thirds of the men concerned in this study have one-room elementary school attendance on their records. They attended this type of school on the average four and forty-eight hundredths years. There is no positive evidence from the data in Table III that attending the one-room rural school bears direct relation to length of teaching experience. Groups teaching eight, nine and ten or more years are above the average in years of

---

<sup>1</sup> Wright, H. P. "The Young Men and Teaching." The Macmillan Co. 1926, p. 48.



Table III. Elementary School Attendance

	Teaching Experience											Summary
	0	1	2	3	4	5	6	7	8	9	10+	
Number of graduates reporting	38	20	51	28	38	15	17	25	19	14	35	300
One room rural												
Number	26	11	43	21	19	8	10	14	15	11	17	195
Per cent	68	55	84	75	50	53	59	56	79	79	49	65
Average years	4.39	3.15	6.00	4.93	3.36	3.47	3.82	3.76	5.68	5.50	5.06	4.48
Two or more rooms rural												
Number	13	3	7	5	11	6	7	12	1	4	18	87
Per cent	34	15	14	18	28	40	41	48	5	29	51	29
Average years	1.50	.35	.55	.82	2.05	2.60	2.47	3.00	.47	1.71	3.23	1.70



Table III. Elementary School Attendance (Continued)

	Teaching Experience											Summary
	0	1	2	3	4	5	6	7	8	9	10+	
Number of graduates reporting	35	20	51	26	31	15	17	25	19	14	35	300
Rural consolidated Number	0	1	3	2	3	1	2	0	1	1	4	18
Per cent	0	5	6	7	8	7	12	0	5	7	11	6
Average years	0	.35	.25	.18	.15	.07	.76	0	.37	.70	.31	.31
Urban Number	10	10	9	9	11	4	4	6	5	3	6	77
Per cent	26	50	17	32	29	27	24	24	26	21	17	26
Average years	1.75	3.85	1.00	1.86	2.00	1.87	1.12	1.25	.75	.57	.11	1.47
Other elementary schools Number	2	0	2	1	1	0	0	0	0	0	1	7
Per cent	5	0	4	4	3	0	0	0	0	0	3	2
Average years	.21	0	.16	.11	.05	0	0	0	0	0	.20	.66
Average total years	7.85	7.70	7.96	7.90	7.91	8.01	8.17	8.00	7.26	8.45	8.91	8.62



attendance at the one-room rural school, but a perusal of their records indicates that quite a number of these teachers were enrolled in the elementary schools before Pennsylvania had a very extensive program for rural school consolidation. If they were to attend school in many of the same communities today they would find the one-room schools replaced by consolidation.

Twenty-nine per cent of the graduates attended rural elementary schools of two or more rooms. The average attendance was one and seven-tenths years. A still smaller number attended rural consolidated schools and those that did averaged in attendance only thirty-one hundredths of a year.

Seventy-seven graduates attended urban elementary schools; however, the length of attendance was short, only one and forty-seven hundredths years.

Other types of elementary schools, such as the parochial school and the private school, played a very unimportant part in the elementary schooling of these men. Seven reported a small amount of such attendance, most of which was at the parochial school. Only one of the seven referred to is at present teaching vocational agriculture.

#### Secondary School Attendance

The graduates referred to in the study are almost equally divided in their secondary school attendance between



rural<sup>1</sup> and urban high schools. Fifty-one per cent attended the rural high school an average of one and ninety-one hundredths years. Forty-eight per cent attended the urban high school an average of one and ninety-four hundredths years.

As in the case of the elementary school, there also seems to be no positive evidence revealed by the data in Table IV that the type of school or length of attendance bears a relation to the length of teaching experience.

The twenty men composing the one-year experience group have attended the rural high school least and the urban high school for the longest period, but any inference that this has been a factor in determining their short teaching experience cannot be safely drawn from limited existing data.

#### Extent to which Graduates Studied Vocational Agriculture when Attending High School

Naturally the first teachers of vocational agriculture, those represented in the upper experience groups of this study, did not have an opportunity to take courses in vocational agriculture when they were attending high school. This fact is brought out in Table V. None of the thirty-five teachers with experience records of ten or more years indicates any instruction in agriculture in his high school

<sup>1</sup> In this thesis a rural school is defined as any district under the jurisdiction of the County Superintendent of Schools except boroughs having a population of 2500 or more.



Table IV. Secondary School Attendance

	Teaching Experience											Summary
	0	1	2	3	4	5	6	7	8	9	10+	
Number of graduates reporting	38	20	51	28	38	15	17	25	19	14	35	300
Rural High School Number	23	5	28	12	21	9	9	14	8	6	17	152
Per cent	61	25	55	42	55	60	53	56	42	43	49	51
Average years	2.21	.90	1.96	1.62	2.06	2.36	2.30	2.10	1.93	1.75	1.59	1.91
Urban High School Number	17	15	21	14	18	8	7	13	9	7	15	144
Per cent	45	75	41	50	47	53	41	52	47	50	43	48
Average years	1.62	3.00	1.63	1.93	1.83	1.93	1.60	1.78	2.20	2.23	1.56	1.94
Average total years	3.83	3.90	3.59	3.55	3.89	4.29	3.90	3.88	4.13	3.98	3.15	3.85

Table V. Extent to which Graduates Studied Vocational Agriculture When Attending High School

	Teaching Experience											Summary
	0	1	2	3	4	5	6	7	8	9	10+	
Number having studied Vocational Agriculture	11	6	16	5	5	7	4	12	1	2	0	69
Per cent having studied Vocational Agriculture	29	30	31	16	13	17	24	48	5	14	0	23
Years studied Vocational Agriculture	.82	1.05	1.00	.46	.45	1.33	.53	1.40	.11	.53	0	.69



records. Two of the nine-year group and one of the eight-year group indicate a very limited amount of such instruction.

In the groups of less teaching experience, which also means to a large extent men graduating more recently from high school, vocational agriculture appears in their high school preparation. Twenty-three per cent of the men, including all experience groups, have had approximately seven-tenths of a year of vocational agriculture.

The summary of the questionnaire further revealed that approximately one trainee in four has had the advantage of at least one year of vocational agriculture when attending high school. The no-teaching experience group ranks comparatively low in the extent to which they have studied vocational agriculture. Though figures in Table IV indicate that graduates in the no-experience group have attended the rural high schools to even a slightly greater extent than have those in the teaching experience group, this group has not received as much instruction in vocational agriculture. It is not unlikely that the matter of interest affects these data. When appearing in the high school curriculum, vocational agriculture usually is offered as an elective subject. Therefore it follows that undoubtedly a number of those in the no-experience group had the opportunity of electing vocational agriculture, if they had so chosen. This element of vocational interest appears as an influencing factor at other points

in this study, a notable example of which is the extent to which summers prior to college graduation were spent on farms, shown in Table X. The no-experience and short-experience groups rank low in amount of summer farm experience during their college years. A strong inference is made that this is due to lack of interest in the farm and the problems of farming.

It seems reasonable to believe that, other things being equal, men who in their high school work have studied vocational agriculture, have conducted farm practice under the supervision of a teacher of agriculture, have been taught according to the accepted vocational methods of instruction and have engaged in the activities of a high school department of agriculture, should be better qualified to become teachers of vocational agriculture than those not having had those experiences.

A survey of the present enrollment, which totals seventy, in the curriculum of agricultural education at The Pennsylvania State College, reveals that one in three of them studied vocational agriculture one or more years when in high school.

#### High School Index Numbers

For several years the registrar of The Pennsylvania



state College has been developing index numbers<sup>1</sup> for high schools from which students are admitted to the institution. The index number for each high school is based upon the records at The Pennsylvania State College made by graduates of the high school. Index numbers of ninety-eight high schools from which men in this study have come to The Pennsylvania State College were available and are the basis of the data presented in Table VI.

Before undertaking to interpret the table, a brief explanation of the manner of computing and of the significance which is attached to these index numbers, is offered.

To illustrate, the index number of a certain high school was found to be 12 - 46800.

Twelve, the number preceding the dash is the number of students to date who have entered The Pennsylvania State College from the high school under consideration.

Five digits, 46800, make up the remaining part of the number. Each digit represents a fifth in the high school class from which students were admitted. From the number shown above it will be seen that students were admitted to the college from the first fifth, the second fifth and the third fifth of the graduating class of this high school. None were admitted from the lower two-fifths of the class.

---

<sup>1</sup> Hoffman, W. S. Registrar of The Pennsylvania State College. Unpublished research.

Table VI. High School Index Numbers

High School Rating	Teaching Experience													
	0	1	2	3	4	5	6	7	8	9	10	Total	Per cent	
A	2	1	1	1	0	0	0	1	0	0	3	9	9	
B	6	3	9	3	7	3	0	4	3	3	6	47	48	
C	3	4	3	1	6	3	0	5	3	2	2	32	33	
D	0	2	1	2	1	1	1	1	0	0	1	10	10	
Total	11	10	14	7	14	7	1	11	6	5	12	98	100	

High School Rating      A      B      C      D

Number of teachers prepared in schools rated      9      47      32      10

Median Grade point averages      1.45      1.41      1.36      1.32

Note:- Groupings A, B, C and D represent quartiles in the sum total rating of high schools sending graduates to The Pennsylvania State College.



High school principals are required to indicate a rating by fifths when signing applications for admission.

The figures 4, 6 and 8 refer to tenths of the freshman class in college. In other words, at the close of their first year in college students admitted from the above high school were among the fourth tenth, the sixth tenth and the eighth tenth of their college class.

The index number 10 - 146X0 would therefore mean that 10 students were admitted; that the ten come from the upper four-fifths of their high school class; and that after spending a year in college their records show them to be among the first, fourth, sixth and tenth (X represents the tenth tenth in making up the number) tenths of their college class.

The index number for a high school may change from year to year as more students are admitted to the college from that high school; the greater the number of students admitted, the greater significance attached to the index number. In using this device to admit students, schools whose graduates have made creditable records at the college are permitted to send graduates from the lower fifths of their class without examination. Schools whose index numbers indicate that poor records have been made by former graduates may possibly have applications accepted from only the upper fifth or possibly the upper two-fifths of their graduating classes. All others desiring admission to the institution from the school



must come by examination.

It be seen that the lower the index number, as, for example, 35 - 12345, the higher the rating value, and the higher the index number, as, for example, 35 - 6789X, the lower the rating value.

In preparing the data shown in Table VI high schools with index numbers the digits of which totaled 15-20 were designated as A, 21-25 as B, 26-30 as C, and 31 or more as D. In other words, groupings A, B, C and D represent quartiles in the sum total rating of high schools sending graduates to The Pennsylvania State College.

It is worth noting that there is a tendency for teachers of long experience to trace their secondary school training to schools of high rating. One-third of the graduates who attended Class A high schools are among the teachers of ten or more years of experience. Seventy per cent of the graduates who came to college from Class D high schools have taught five years or less.

The table also indicates the median grade point college averages earned by the students who enrolled in the curriculum of agricultural education from the four different classes of high schools. Class A high school graduates earned the largest number of grade points, and as the class of high school descends so also do the grade point averages of the graduates.

These data would bear greater significance if index



numbers were available for more of the high schools from which trainees graduated. The office of the registrar will in time have numbers determined for every school sending a reasonably large number of its graduates to The Pennsylvania State College. Even though the data are meager, there is a strong indication that the index numbers as computed are predictive of college success and long continued teaching experience for college graduates whose secondary school training traces to high schools of high index numbers.

SummaryElementary School Attendance

Sixty-five per cent of the graduates attended the one-room rural elementary school and average of 4.46 years. Twenty-nine per cent attended rural elementary schools of two or more rooms an average of 1.7 years. Six per cent attended rural elementary consolidated schools an average of .31 of a year. Seventy-seven per cent attended urban elementary schools an average of 1.47 years.

Secondary School Attendance

The graduates were almost equally divided in their secondary school attendance between rural and urban high schools. Fifty-one per cent attended the rural high school an average of 1.91 years. Forty-eight per cent attended the urban high school an average of 1.94 years. There was no evidence in the data that either rural or urban school attendance was closely associated with length of teaching experience.

Studied Vocational Agriculture

Twenty-three per cent of the graduates have had an average of .69 of a year of vocational agriculture in their secondary schooling. Thirty-five per cent of the students who are now enrolled in the curriculum of agricultural education at The Pennsylvania State College received one or more years of instruction in vocational agriculture when in high school. Men who studied vocational agriculture when in high school are believed to be better qualified to



become teachers of the subject than those not having had the experience.

#### High School Index Numbers

Thirty-three and one-third per cent of the graduates who attended Class A high schools are among the teachers of ten or more years of experience. Seventy per cent of the graduates who attended Class B high schools have taught five years or less.

The median grade point averages earned by students coming to college from high schools of the four degrees of rating are as follows: Class A, 1.45; Class B, 1.41; Class C, 1.36 and Class D, 1.32.

The rating of the secondary school which a trainee attended is an important success predictive factor. Since a high proportion of the Class A schools are urban, the evidence favors the urban school for preparatory training for teachers of vocational agriculture.

## CHAPTER III

## FARM EXPERIENCE

There always has been quite general agreement among those responsible for shaping the program for vocational education in agriculture that teachers of agriculture should be well fortified in the so-called practical farm experiences. If they are to stimulate, encourage and direct farm boys to acquire abilities to carry on successfully the activities of the farm, then they too should know from first-hand experience the problems of farming. Every teacher of vocational agriculture should have had considerably more practical farm experience than that which he intends requiring of the boys whom he is training.

The Federal Board for Vocational Education recognized the importance of farm experience in the preparation of teachers of agriculture, mentioning it specifically in one of its earliest publications dealing with the organization and administration of teacher-training under the vocational education act as follows:

"The teacher of agriculture in the high school department of agriculture must possess a combination of the qualifications of a teacher of home farm work and a teacher of related work. ----

"He should be a practical farmer as evidenced by at least two years of successful experience in farming. It should be noted that a boy who has been reared on a farm, and, as is usual with farm boys, has taken part in the business of farming as practiced at home, and



who has graduated from a college course of instruction in agriculture, meets this qualification.

"He should know and be in sympathy with farm life, not theoretically, but from having actually been in the place of the pupils whom he is teaching."<sup>1</sup>

Much has been said of the possession of qualities of leadership on the part of successful teachers of vocational agriculture. Elusive and intangible as these leadership qualities often seem, we are inclined to point to the teacher of agriculture who commands the respect of the farmers of his community as one possessed of desirable leadership qualities. A most certain way to gain this respect of the farmer is for the teacher to have participated in farming experiences, and to be able to discuss the farmer's practical problems in the light of his own experiences.

The several states, in submitting their plans for developing programs for agricultural education, concur with the Federal Board in the opinion that effective instruction in agricultural subjects requires teachers with a high degree of farming skill and an understanding of the demands of the occupation. A period of two years or more of practical farm experience appears as a requirement for teachers of vocational agriculture in the plans of a number of states.

A farm experience requirement is not made of vocational

---

<sup>1</sup> Federal Board for Vocational Education, Bulletin No. 13. Agricultural series No. 1. Agricultural Education - Organization and Administration.



agriculture trainees entering the teacher training department at The Pennsylvania State College nor is it made of teachers employed in the teaching of vocational agriculture throughout the state. The institution does not maintain a general practicum or farm experience requirement for all graduates of the School of Agriculture, and it is probably very largely for this reason that a special farm-experience requirement has not been established for Rural Education, the department through which students receive their preparation to teach vocational agriculture.

#### Farm Reared Graduates

It will be readily observed by referring to Tables VII, VIII and IX that, as a group, the Pennsylvania teachers of vocational agriculture are possessed of a considerable farm and farming experience. Two hundred and forty-five of the three hundred teachers, eighty-two per cent, report that they are farm reared. Ninety-one per cent of those who make no claim of being reared on farms indicate that they have at some time prior to entering upon teaching acquired certain farm experience. Spending one or more summers on the farms of relatives is the most frequent way of obtaining this experience. Several mentioned that their parents owned farms and that, although they did not live on these farms, opportunity was afforded the sons to work during the summers with the tenants. A few served as employees on the college



Table VII. Farm Experience

Teaching Experience	Number of Graduates	Farm Reared		Average Size of Farm	Non-Farm Reared	Non-Farm Indicating Farm Experience	Per cent Non-Farm Reared	Per cent Non-Farm Reared Indicating Farm Experience
		No.	Per cent					
0	38	29	76.3	177.0	9	7		
1	20	12	60.0	101.5	8	6		
2	51	45	88.2	138.7	6	6		
3	28	20	71.4	120.9	8	8		
4	38	30	78.9	127.0	8	8		
5	15	12	80.0	129.5	3	2		
6	17	15	88.2	144.2	2	2		
7	25	23	92.0	111.8	2	2		
8	19	15	79.0	112.8	4	4		
9	14	14	100.0	160.5	0	0		
10+	35	30	85.7	132.9	5	5		
Summary	300	245	82.0	123.4	55	50	18	91

Per cent farm reared - (Groups 1-5) 75.7      Average size of farms (Groups 1-5) 123.5 acres  
 Per cent farm reared - (Groups 6-10+) 88.98      Average size of farms (Groups 6-10+) 133.4 acres



farms, some working part-time during the college year and others for the summer only. Two were adventurous enough to spend summers in the wheat fields of Kansas and Oklahoma. While helpful, these several sorts of farm experiences can in no sense be considered comparable with that of living the year around on a farm, and of participating in the seasonal problems of the different enterprises of the farm. From Table VII it will be seen that, as the length of teaching experience increases, the tendency is for the percentage of farm reared teachers with the experience group to increase. Only sixty per cent of those having taught but one year are farm reared. Seventy-five and seven-tenths per cent of those having taught one to five years inclusive are farm reared. In the upper experience groups, those having taught six or more years, the per cent of farm reared teachers sharply increases, the average being eighty-eight and ninety-eight hundredths per cent.

It may be noted that the group without teaching experience ranks higher in the farm reared factor than those teaching one to five years. It will also be shown later in the discussion that the average size of farm is higher for this group than for any other group. There is a strong probability that from year to year a number of men register in the curriculum of agricultural education who do not intend to teach. They have come from farms and plan to return to the



farms, and in preparation for farming they find the curriculum in agricultural education meeting their general needs.

Students following such intentions find encouragement in the words of A. W. Nolan<sup>1</sup>, writing concerning the present surplus and unemployment of teachers of agriculture in Illinois.

"Teachers of agriculture for whom there are no opportunities afforded in the schools, will naturally turn to the land - and fortunate indeed for him, who has the land to which he can turn. With his broad technical training in agriculture, his philosophy of rural life and his experience and resourcefulness, the agricultural education graduate should be able to readily adjust himself to farming as a livelihood."

Five graduates are shown in Table VII as not being farm reared and as not offering anything in the way of farm experience. The place of these men in terms of experience is significant. Two did not teach. One of them indicated that he is now a mercantile salesman and the other gave no occupation. Two taught vocational agriculture one year each. They reported that their occupations are that of salesman and gasoline service station owner. A fifth graduate was employed two years as teacher of agriculture and supervising principal. He no longer teaches but does not indicate his occupation. If one may make an inference from these five cases, it is that men who are not farm reared or who have not

---

<sup>1</sup> Nolan, A. W., Professor of Agricultural Education, University of Illinois. The Fan-Mill. June, 1933.

acquired farm experience do not tend to find the teaching of vocational agriculture their life work.

Eighty-two per cent of all the graduates involved in this study are farm reared and they represent graduating classes dating back to the year 1913. To discover if possible if there was any tendency away from this high proportion of farm reared men in the field of vocational agriculture teaching, a survey was made of the students who are enrolled at present in the curriculum in agricultural education at The Pennsylvania State College. The present enrollment, 1932-33, totals seventy. Ninety-one and five-tenths per cent are farm reared. Eighty-eight per cent indicated that their homes at present are on farms. The factor of farm experience gained by being reared on a farm is therefore of increasing significance among men preparing to become teachers of vocational agriculture.

#### Size of Farms

It was indicated in Table VII that farm reared graduates without teaching experience were reared on farms of the greatest acreage. As pointed out earlier, it is believed that this group contains a number of men who come from farms with the full intention of returning to them after graduating from college. It is natural to suppose that farms exerting this influence in the vocational choices of young men would be of average or more than average size.



As the teaching experience of the groups increases, so does the average size of farms from which the farm reared members of the groups come. The average size of farm for groups with teaching experience ranging from one to five years inclusive is one hundred and twenty-three and five-tenths acres. For groups of six years and more of teaching experience the average size of farm on which they were reared is one hundred and thirty-three and four-tenths acres. For all farm reared graduates irrespective of teaching experience, the average size of farm is one hundred and twenty-three and four-tenths acres.

The average size of farm from which come the farm reared students now enrolled in teacher training is one hundred and forty-seven acres. The average size of farms in general is reported to be larger than it was ten and twenty years ago, and this may account for some of the increase indicated.

#### Major Farm Enterprises

Tables VIII and IX are inserted to show the farm enterprises with which the farm reared graduates have gained experience and also the relative importance of these farm enterprises. The tables do not indicate the farm enterprise experience gained by the non-farm-reared group.

Each man was asked to state in order of importance four farm enterprises existing on his home farm. The number of



Table VIII. Expressed Major Enterprises on Some Farms

Teaching Experience	Number Farm Reared	Average Size of Farm	Dairy				Grain Crop				Poultry				Swine			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
0	29	177.0	14	6	2	2	7	7	5	1	6	3	8	1	0	1	3	3
1	12	101.5	6	2	0	0	2	2	3	0	1	0	1	2	0	1	2	0
2	45	136.7	22	5	2	0	8	11	5	1	2	7	0	8	4	6	2	0
3	20	120.9	8	5	1	0	4	3	4	0	1	6	3	2	1	1	0	0
4	30	127.0	16	3	3	1	4	11	4	3	3	7	5	2	4	2	2	1
5	12	129.5	6	0	3	0	3	3	2	1	2	1	1	0	0	3	1	2
6	15	144.2	8	2	2	1	6	5	2	1	1	2	3	2	0	1	4	0
7	23	111.8	10	4	2	0	3	2	7	0	1	3	3	3	1	1	1	2
8	15	112.8	8	2	1	0	2	3	3	2	3	2	2	1	2	4	1	1
9	14	160.5	6	2	0	2	2	5	2	0	1	2	3	1	1	0	1	2
104	30	132.9	12	3	2	0	5	9	3	1	0	0	4	2	2	4	1	1
Summary	245	123.4	116	34	18	6	46	61	40	10	21	33	33	24	15	24	18	12



Table VIII. Expressed Major Enterprises on Some Farms (Continued)

Orchard				Potatoes				Garden Truck				Sheep				Small Fruits				Miscellaneous				Beef Cattle			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
0	0	1	2	2	4	1	1	0	3	1	0	0	0	0	2	0	1	0	0	0	2	1	0	0	1	0	0
1	0	2	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	7	1	0	3	3	1	3	1	3	0	2	4	1	0	0	2	0	0	0	0	1	0	0	0	0	0
2	1	0	1	1	3	1	0	2	0	3	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0
1	2	2	2	0	2	5	2	3	2	1	2	4	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0
0	1	1	2	1	0	0	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0
0	0	1	4	1	0	1	0	0	2	2	0	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0
2	1	2	0	4	2	0	1	0	3	0	1	0	2	1	2	0	0	0	0	0	0	0	1	0	1	0	0
0	2	3	1	1	0	2	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	0	0	0	0	1	0
0	0	1	0	0	2	1	0	2	1	0	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0
2	3	2	1	1	2	0	0	1	1	1	2	2	2	0	1	1	2	3	1	1	1	1	0	0	0	0	0
10	12	22	15	11	18	14	5	12	16	12	7	11	15	3	7	1	7	4	1	2	3	5	2	0	3	3	0



Table IX. Relative Importance of Expressed Major Enterprises on Home Farms

Teaching Experience	Relative Enterprise Importance			
	1	2	3	4
0	Dairy	Grain	Poultry	Potatoes
1	Dairy	Grain	Poultry	Orchard
2	Dairy	Grain	Poultry	Swine
3	Dairy	Poultry	Grain	Garden truck
4	Dairy	Grain	Poultry	Swine
5	Dairy	Grain	Poultry	Swine
6	Grain	Dairy	Poultry	Swine
7	Dairy	Grain	Poultry	Potatoes
8	Dairy	Grain	Swine	Poultry
9	Dairy	Grain	Poultry	Garden truck
104	Dairy	Grain	Orchard	Swine
Summary	Dairy	Grain	Poultry	Swine



farm reared men reporting in the different teaching experience groups, the average size of their farms by groups, and the weighted rating of enterprises are indicated.

It is significant to mention that throughout the years practically the same importance is attached to these expressed major enterprises on the home farms of former students and teachers. Dairying, the leading animal enterprise in the state, from the standpoint of farm income, consistently ranks high. Closely associated with dairying is grain production, supplementing the dairying enterprises, and also an important cash enterprise on Pennsylvania farms. Poultry occupies third place.

From these data, we may infer that if a man is farm reared in Pennsylvania, the likelihood of his gaining experience and contact with the leading farm enterprises such as dairying, grain crops and poultry is very great. These are also the leading farm enterprises taught in the agricultural courses in the high schools of the state. The certainty of contact through his farm experience with the major farm enterprises of the state is an important factor in his preparation for agriculture teaching and is highly predictive of his success as a teacher of agriculture.

#### Summers on Farms While Attending College

Two hundred and seventy-eight graduates replied to the question pertaining to the extent to which they spent on the

farm the four summers prior to college graduation. Since they were practically mature men at this time, it is probable that, if on a farm, they were assuming considerable operative and perhaps some managerial responsibilities.

The average for all groups was slightly more than three summers. The no-experience group put in the least time on farms during these particular summers. As the years of teaching experience increased, so also did the proportion of summer time devoted to farming.

It will be remembered that eighty-two per cent of these graduates were farm reared and that a large proportion of those not farm reared had at their disposal facilities for gaining farm experience. Therefore, it seems likely that, if the trainee has a bona fide interest in farming, he will devote his college summers to the practice of farming. Certainly without genuine farm interest one cannot be a very successful teacher of farming. Table X clearly indicates that teachers of vocational agriculture of long teaching experience are for the most part men who had this interest, and who, when in college, devoted their summers to improving their skill in the practices of farming.

#### Operation of a Farm Prior to Teaching

Seventy-five teachers responded in the survey that they had operated a farm for at least one year prior to entering teaching.

A part of this experience in operating farms was gained



Table X. Extent to which 4 Summers Prior to College Graduation Were Spent on Farms

	Teaching Experience											Summary
	0	1	2	3	4	5	6	7	8	9	10+	
Number reporting	35	19	28	26	37	14	16	24	18	12	29	278
Summers on farms	2.77	2.84	2.85	3.20	3.05	3.56	3.06	3.04	3.27	3.33	3.44	3.13

prior to attending college, notably with that group of World War veterans who came to the college for rehabilitation training. Twelve of these men are at present teaching vocational agriculture in the state. Fully one-half of them were farming before entering military service. Because of injuries and the opportunity offered them by the government for rehabilitation training, they did not return to their farms but pursued training for the teaching of vocational agriculture.

Another, but somewhat smaller, group of men has graduated from other departments of the school of agriculture, farmed for a time, and finding farming unprofitable or otherwise undesirable, has returned to the college, supplementing earlier training particularly with professional courses in education and has gone out to teach vocational agriculture. This number has increased materially since the depression years.

Those with the fewest years of teaching experience claim also the fewest years of farm operating experience. The average-sized farm operated by these teachers was one hundred and fifty and two-tenths acres. There is some indication from the data presented in Table XI that farm operating experience contributes to length of teaching experience.



Table XI. Operation of a Farm Prior to Teaching

	Teaching Experience										Total
	1	2	3	4	5	6	7	8	9	10+	
Number reporting	20	51	28	38	15	17	25	19	14	35	262
Number operated farms	4	16	8	12	6	5	5	7	5	7	75
Per cent operated farms	20	31	29	32	40	29	20	37	36	20	29
Average size of farms	83.7	162.6	108.1	155.3	177.3	163.0	101.0	183.5	194.0	137.5	150.2
Average years operated	1.25	2.25	3.37	4.75	3.66	3.80	3.80	3.25	4.80	3.28	3.42

SummaryFarm Reared Graduates

As the length of teaching experience increases the tendency is for the per cent of farm reared teachers within the experience groups to increase. The average per cent of farm reared teachers for all experience groups is 82.0.

Seventy-five and seven-tenths per cent of the graduates with 1-5 years of teaching experience are farm reared.

Eighty-eight and ninety-eight hundredths per cent of the graduates with 6-10+ years of teaching experience are farm reared.

Ninety-one per cent of those not farm reared acquired farm experience prior to teaching.

Size of Farms

The average size of farms on which teachers of all experience groups were reared is 123.4 acres; for groups with 1-5 years of teaching experience, 123.5 acres; and for groups with 6-10+ years of teaching experience, 133.4 acres.

Major Farm Enterprises

Contact through farm experience with the major farm enterprises of the state is an important predictive factor related to the success of the teacher of agriculture.

This order of expressed major farm enterprises conducted on the home farms of the graduates is as follows: 1. Dairy; 2. Grain crops; 3. Poultry; 4. Swine; 5. Orchard; 6. Potato;



7. Garden truck; 8. Sheep; 9. Small fruits; 10. Beef cattle.

Summers on Farms While Attending College

The amount of summer time spent on farms during college years is indicative of farm interest.

The average of summers spent on farms for all teaching experience groups was 3.13 during the four years prior to college graduation.

The no-teaching experience group devoted the least summer time on farms, averaging for the four summers prior to college graduation only 2.77 summers.

Operation of a Farm Prior to Teaching

Twenty-nine per cent of the graduates operated a farm for at least one year prior to teaching.

The average years operated was 3.42. The average size of farms operated was 150.2 acres.

Graduates with the least teaching experience claimed also the fewest years of farm operating experience.

## CHAPTER IV

EXPRESSED ATTITUDES, DECISIONS AND INFLUENCES  
TOWARD TRAINING FOR TEACHING

It is generally conceded to be true that the factor of interest in one's work is a dominant factor in determining one's success. This is perhaps more true of teaching than of most vocations, for sufficient material reward to subordinate genuine interest seldom exists in the teaching profession.

In this study it seemed desirable to secure an expression of attitude on the part of the students toward attending college and training to become teachers of vocational agriculture. The attitudes of fathers and mothers toward having their sons attend college were also gathered. The occupations of the parents of the graduates were studied. The time when the student made the decision to enter the teaching profession was recorded and reasons for said decision noted.

Student's Personal Attitude Toward College Attendance

The facts presented in Table XII leave no doubt that the student's personal attitude toward college attendance was enthusiastic. However, it is believed that the question of enthusiasm or disinterest does not reveal more than a very general attitude on the part of students toward attending college, and that it bears little evidence concerning their interest in the particular college curriculum which they were pursuing.



Table XII. Attitude Toward Attending College

Teaching Experience	Number of Graduates	Father			Mother			Student		
		Favorable	Indifferent	Discouraging	Favorable	Indifferent	Discouraging	Enthusiastic	Neutral	Disinterested
0	38	29	6	2	31	3	2	33	3	1
1	20	15	1	2	19	1	0	30	3	0
2	51	36	4	6	28	4	1	31	2	1
3	28	19	8	0	21	3	1	26	1	1
4	38	32	1	5	35	1	1	36	2	0
5	15	10	3	0	12	1	0	11	3	0
6	17	14	1	1	15	2	0	16	1	0
7	25	16	4	0	22	0	0	21	4	0
8	19	16	1	0	15	2	0	18	0	0
9	14	9	3	1	12	1	0	17	1	0
104	35	21	8	4	32	2	0	33	2	0
Summary Total	300	217	40	21	242	20	5	272	21	3
Per cent		70	13	7	81	7	2	91	7	1



Three graduates responded that they were disinterested in attending college. One of these three has never taught and the other two taught for only a short period.

Inasmuch as more than ninety per cent reported enthusiasm for college and also inasmuch as comparatively few who recorded a neutral or disinterested attitude toward college attendance received employment as teachers of vocational agriculture, it may be well to assume that a student must want to go to college and must look enthusiastically upon his college and college work, if he is to become a successful teacher of vocational agriculture.

#### Parents' Attitude Toward College Attendance

It will be seen by referring again to the data that the attitude of both the father and the mother toward their sons' attending college was recorded in three degrees; favorable, indifferent, and discouraging.

The mothers proved to be more of an encouragement to their sons in their college ambitions than did the fathers. Eighty-one per cent of the mothers were reported as favorable. Seventy per cent of the fathers were reported as favorable. Only two per cent of the mothers actually discouraged college attendance, while seven per cent of the fathers assumed a discouraging attitude. Approximately twice as many fathers as mothers expressed indifference. It is probable that some of this discrepancy of parental attitude may be traced to the fact that the father had more responsibility in providing the



money for the education, and doubted to some extent the wisdom of investing so much money in the son's college training.

The men in the group who have taught ten or more years received twenty-five per cent more encouragement to attend college from their fathers and fifty per cent more encouragement from their mothers than did the group of graduates who did not secure employment as teachers of vocational agriculture. The number of graduates in the zero group and in the ten-year-plus group is approximately equal.

#### The Occupation of the Parents

In the questionnaire sent to the graduates information was sought regarding the father's occupation at the time the recipients of the questionnaire were growing up. Also among the facts pertaining to each man obtained from the files of the registrar's office, the father's occupation, as indicated by the student when he first enrolled in college, was noted. From these two checks accurate and complete information was gained on the reported occupations of the father of every man whose record is a part of this study.

As is also brought out in other places in the thesis, in the past men who have enrolled for teacher training in agricultural education and have become the teachers of vocational agriculture have been largely sons of the soil. In a preceding chapter it was pointed out that eighty-two per cent are farm reared.



Table XIII. Fathers' Occupations

Years of Experience	Agriculture and Forestry	Skilled and Unskilled Labor	Business and Commerce	Professions	Building	Transportation and Communication	Mining	Manufacturing	Miscellaneous	Total Occupations Reported
0	24	5	4	3	1	2	2	1	0	42
1	10	3	2	2	0	1	1	0	0	19
2	39	3	1	5	2	1	1	0	0	52
3	9	1	0	3	4	3	0	0	1	21
4	26	3	2	2	3	4	0	0	0	40
5	9	1	2	1	0	0	0	1	1	15
6	12	2	2	0	0	0	0	1	0	17
7	19	1	2	2	2	0	0	0	0	26
8	12	1	2	1	3	1	0	0	0	20
9	12	0	0	0	0	0	1	1	0	14
10+	23	1	5	2	5	1	1	0	1	39
Summary Total	195	21	22	21	20	13	6	4	3	305
Per cent	64	7	7	7	6	4	2	1	1	



Sixty-four per cent indicate that their fathers' occupations were connected with agriculture or forestry at the time when they enrolled in the college of agriculture for training to become teachers. Other occupation groups represented are skilled and unskilled labor, seven per cent; business and commerce, seven per cent; professions, seven per cent; building trades, six per cent; several other occupation groups of still lesser importance.

It is difficult to see from the data in Table XIII any tendency of behavior on the part of those trainees and teachers whose parental occupations are traced to groupings other than agricultural. There is some slight evidence pointing to shorter teaching experience associated with certain of the smaller occupation groups. For example, twenty-one graduates report that their fathers are engaged in the professions. Sixteen of these men have less than five years of teaching experience. Much the same is true in the case of men whose fathers were engaged in business and commerce, and also in the case of the sons of skilled and unskilled workers.

It may possibly follow from these citations that an agricultural experience is an essential background factor for a teacher of vocational agriculture; and also that, to be the son of one whose occupation is in agriculture is a most certain way to gain this agricultural experience.



Time When Decision to Teach Was Made

Thirty-four per cent of the graduates reporting made their decision to prepare for teaching before entering college, forty-six per cent decided while in college, and as many as twenty per cent came to the conclusion that they wanted to teach after graduating from the school of agriculture.

The latter number is composed largely of the older groups of teachers, men who completed their college work before the passage of the Smith-Hughes act and the organization of the teacher-training curriculum. Less than one-half of the teachers with ten or more years of experience graduated in the curriculum of agricultural education. At that time their majors were in agronomy, animal husbandry and other existing departments. These men, former graduates of the institution, returned to the college, some for a full school year and others for summer sessions, and in this way met the requirements in psychology and special methods in teaching vocational agriculture. The fact that so many of these older men made new decisions tends to cause the figures in Table XIV to be somewhat misleading. Now it is the unusual occurrence for a man to prepare first in some other field in agriculture and then to decide to turn to teaching. The present existence of a regular four-year curriculum in agricultural education necessitates an early decision on the part of the student.



Table XIV. Time When Decision Was Made to Teach Vocational Agriculture

	Teaching Experience											Summary
	0	1	2	3	4	5	6	7	8	9	10+	
Number of graduates reporting	35	20	49	26	36	15	17	25	19	14	32	287
Before College Number	15	6	23	4	14	3	7	10	6	5	5	98
Per cent	43	30	48	15	39	20	41	40	32	36	16	34
In College Number	20	9	16	15	11	8	7	12	9	7	17	131
Per cent	57	45	33	57	30	53	41	48	47	50	53	46
After College Number	0	5	9	7	11	4	3	3	4	2	10	58
Per cent		25	19	28	30	27	18	12	21	14	31	20

Omitting the older teachers, those affected mostly by a change in decision, it is apparent that earlier decisions to teach are associated with the longer teaching experiences. Fifty-seven per cent of the thirty-five graduates who never secured employment as teachers made their decisions to pursue teacher-training courses after having first entered some other college curriculum. Indecision accompanying change from one curriculum to another is not conducive to thorough preparation. Indecision doubtless continues with some of these men and may be the cause for leaving the profession after a relatively short teaching experience.



SummaryStudent's Personal Attitude Toward College Attendance

Ninety-one per cent of the graduates replied that they were enthusiastic toward attending college, 7.0 per cent were neutral, and 1.0 per cent was disinterested.

Parents' Attitude Toward College Attendance

The mothers were more encouraging to their sons in their college ambitions than were the fathers. The attitude of 81.0 per cent of the mothers was reported as favorable. Two per cent of the mothers discouraged college attendance. The attitude of 7.0 per cent of the fathers was discouraging.

Graduates with the longest teaching experience, ten or more years, received 37.5 per cent more parental encouragement than did the graduates in the no-experience group.

The occupation of the Parents

The occupation of 64.0 per cent of the fathers was in agriculture at the time their sons enrolled in college.

Seven per cent of the fathers were reported as skilled and unskilled laborers, 7.0 per cent in business and commerce, 7.0 per cent as belonging to the professions and the remaining 15.0 per cent in miscellaneous occupations.

Time when Decision to Teach Was Made

Thirty-four per cent of the graduates made their decision to prepare for teaching before entering college, 46.0 per cent while in college, and 20.0 per cent after graduation.

fifty-seven per cent of the 35 graduates who never secured teaching employment made their decisions to pursue teacher training courses after having first entered some other college curriculum.

An early and permanent decision to teach is predictive of teacher success.



## CHAPTER V

### GENERAL INTELLIGENCE OF THE GROUPS

A problem which takes into consideration significant pre-employment background factors affecting the length of teaching experience of the teacher of agriculture would not be complete without some reference to the teacher's native intelligence. A considerable research has been pursued in an attempt to correlate teaching success with teacher intelligence. While this study is not directly concerned with teaching success, it is indirectly, for after all length of teaching experience is one measure of teaching success.

Pyle<sup>1</sup> makes the following conclusion after studying the reported teaching success of three hundred and fifty-eight teachers who graduated from Detroit Teachers College.

"Intelligence test scores do not enable one to predict success in practice teaching or later teaching success in actual practice."

Madsen<sup>2</sup> raises the question, "What is the lowest limit of intelligence which a normal school student must have in

---

<sup>1</sup> Pyle, W. H. "Relation Between Intelligence and Teaching Success," *Educational Administration and Supervision*, Vol. XIV, 1928, pp. 257-267.

<sup>2</sup> Madsen, I. M. "The Prediction of Teaching Success," *Educational Administration and Supervision*, Vol. XIII, 1927, pp. 39-47.

order to acquire training necessary for teaching success?" He attempted to throw light on the question by studying what he terms traits and qualities of graduates of the Idaho state Normal School. He found that thirty-one graduates who were reported by their principals as being "total failures" as teachers were in the lowest ten per cent of their normal school classes in intelligence. He also reports that eighty per cent of the reasons given by principals for teacher failure are directly related to the intelligence factor.

Madsen concludes that the most promising measures of predicting success in teaching now available are: "(1) reliable and valid measures of general intelligence; (2) measures of proficiency in previous school career; and (3) measures of achievement while in normal school."

It is significant to note that these measures which Madsen refers to are also the basis of several pre-employment background factors to which this study attaches importance for the teacher of vocational agriculture.

Knight<sup>1</sup> accepts the mental test as a useful means of selecting and predicting success of teachers. However, he hastens to point out that it must be used with discretion.

---

<sup>1</sup> Knight, F. B. "Qualities Related to Success in Teaching." Teachers College, Columbia University, Contributions to Education, No. 120. New York. Bureau of Publications, Columbia University.



quoting from him,

"We know, of course, that a stark idiot could not teach; but, on the other hand, we do not know how much intelligence is the ideal amount for teachers to possess. It is well within reason to suppose that too much intelligence among those who do some kinds of teaching work is a handicap, just as in a corresponding degree too little intelligence is a handicap to other teachers.

"Similarly, a certain amount of health is a minimum essential for teaching, but it has never been shown that the healthiest teachers are the best teachers. After a certain standard of health is reached, more health may not be effective in improving the quality of teaching."

#### Intelligence Scores

It is only in comparatively recent years that all students, when entering The Pennsylvania State College, have been given an intelligence test. Preceding the general adoption of this policy, the psychological examination was used in a more or less experimental way by the Department of psychology and in a few other divisions of the institution.

Intelligence scores, obtained by administering The Pennsylvania State College Psychological Examination, were found in the registrar's records for one hundred and three graduates whose other records are a part of this study. The distribution of scores among the ten teaching experience groups is shown in Table XV. While there are scores appearing for graduates in every experience group, the numbers are small and consequently their significance is relatively low.

It may be noted that graduates with records in the first

Table XV. Intelligence Scores\* Made When Attending The Pennsylvania State College

	Teaching Experience											Summary
	0	1	2	3	4	5	6	7	8	9	10+	
Number of graduates	15	4	24	8	17	6	6	15	5	2	1	103
Average I. Q.	88.4	96.8	83.7	66.8	87.6	80.6	106.0	94.8	110.4	124.2	142.0	95.7

\* - "The Pennsylvania State College Psychological Examination", The Dunmire Printing Company, Altoona, Pennsylvania.



five experience years are on the average possessed of much lower intelligence than are graduates of longer teaching experience, six or more years. The average intelligence quotient for all graduates who took the test is 95.7.

#### Intelligence Compared to Other Groups

Table XVI is inserted to show the comparative intelligence of agricultural education students with students in the school of agriculture and in the college as a whole.

The table would indicate that men presenting themselves for training to teach vocational agriculture are obviously below the average intelligence for the school of agriculture and for the college. Furthermore, there is no indication for the five year period shown in the table that their intelligence is increasing. The average score for all schools and for the school of agriculture reveals a slight upward trend. Discouraging as it may seem, this is an important factor in analysing the pre-employment background of men becoming teachers of vocational agriculture.

It is apparent from the data available that intelligence is a factor at work in affecting tenure of teachers of vocational agriculture; just how much importance to attach to it is difficult to determine. A large number of the freshmen whose scores go to make up the five-year mean of 82.4 for Agricultural Education do not complete their training course, and those of lowest intelligence tend to drop out first. There is a considerable spread between the mean scores for

Table XVI. Scores Made by Freshmen on The Pennsylvania State College Psychological Examination for Five Year Period, 1927-31

Year	1927	1928	1929	1930	1931	Five Year Mean
All Schools	100.8	101.9	98.4	103.9	105.5	102.1
Agricultural Schools	89.4	93.0	90.1	94.2	97.2	92.8
Agricultural Education	83.5	82.6	79.0	85.1	81.7	82.4
Maximal Score All Schools	175.0	166.0	170.4	178.0	171.0	172.1

Maximal possible score = 247 "The Pennsylvania State College Psychological Examination,"  
The Dunsmire Printing Company, Altoona, Pennsylvania.



trainees and the mean scores for graduates who teach, indicating that no doubt intellectual alertness is a factor in securing a teaching position. It is conceded to be a factor in holding a teaching position and the data in the table indicate that it is also a factor in extending teaching experience.

SummaryIntelligence Scores

The average intelligence quotient for all graduates in the curriculum in agricultural education for whom scores were available was 95.7.

Graduates with teaching experience records under five years show a much lower intelligence quotient than do those in the upper experience groups.

While sufficient scores were not available to render the data conclusive, the facts at hand strongly indicate that native intelligence is a most dependable factor in predicting teacher success.

Intelligence Compared to Other Groups

The average intelligence of agricultural education students enrolling at the college for the five year period, 1927-1931, was 82.4; for all students in The School of Agriculture, 92.9; and for all students in the college, 102.1.

Trainees in agricultural education are below the average in intelligence for students in The School of Agriculture and for the college as a whole.



## CHAPTER VI

## PARTICIPATION IN EXTRA-CURRICULAR ACTIVITIES

Studies have been made on the relationship of extra-curricular activities to contemporaneous achievement in both secondary schools and colleges. Still other problems have dealt with the relationship between participation in extra-curricular activities and later success. In this research problem data pertaining to extra-curricular activities of both high school and college are presented in relationship to length of teaching experience and as a contribution to a descriptive background of the pre-employment activities of teachers of vocational agriculture.

Extra-Curricular Secondary School Activities

For purposes of organization the extra-curricular secondary school activities have been grouped under the captions of athletics, music, publications, civic activities, forensic activities, dramatics and miscellaneous activities. The distribution of these high school activities for the three hundred college graduates under consideration, divided according to their years of teaching experience, is shown in Table XVII.

For the graduates as a whole athletics claimed the greatest interest. Sixty-three per cent participated in one or more forms of high school athletics. The groups of lesser



Table XVII. Extra Curricular Secondary School Activities

Teaching Experience	Number of Graduates	Athletics		Music		Publications		Civic		Forensic		Dramatics		Others		Total	Activities per man
		Number Participating	Per cent Participating	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent		
0	38	25	66	5	13	6	16	1	3	2	5	20	53	3	8	62	1.84
1	20	10	50	2	10	3	15	0	0	4	20	8	40	1	5	28	1.40
2	51	31	61	4	8	9	18	0	0	6	12	26	51	7	14	83	1.63
3	28	18	64	5	18	2	7	0	0	6	21	7	25	6	21	44	1.57
4	38	28	74	2	5	5	13	4	11	3	8	13	34	4	11	59	1.55
5	15	9	60	2	13	1	7	0	0	1	7	7	47	1	7	21	1.40
6	17	11	65	3	27	3	27	1	6	1	6	10	59	1	6	30	1.76
7	25	18	72	5	20	3	12	1	4	4	16	12	48	3	12	46	1.84
8	19	8	42	2	11	4	21	0	0	2	11	8	42	2	11	26	1.37
9	14	5	36	0	0	3	22	0	0	2	14	5	36	0	0	15	1.07
104	35	25	71	4	11	6	17	8	23	7	20	16	46	2	6	68	1.94
Sum- mary	300	188	63	34	11	45	15	16	5	38	13	132	44	30	10	482	1.61



teaching experience participated slightly more in athletics than did groups of longer teaching experience. Groups having taught eight, nine and ten or more years were approximately as interested in dramatics as they were in athletics. Greater interest was shown in publications by the more experienced groups. The no-experience men indicated only about one-third as much participation in forensic extra-curricular activities as the average for all groups and only one-fourth as much participation along that line as in the case of the ten-plus group of teachers.

The average per man for all groups was one and sixty-one hundredths activities. While the ten-plus group ranked higher than the total average, and higher than the average for any one of the lower experience groups, the remaining data do not indicate close correlation between participation in secondary school extra-curricular activities and length of teaching experience.

High schools, and particularly rural high schools, the type which fifty-one per cent of these men attended, offer limited opportunities in extra-curricular activities. This fact alone makes it impossible to attach much significance to secondary school extra-curricular activity participation.

#### Extra-Curricular College Activities

The same classification as was used in considering the secondary school extra-curricular activities was also employed



Table XVIII. Extra Curricular College Activities

Teaching Experience	Number of Graduates	Athletics		Music		Publications		Civic		Forensic		Dramatics		Others		Total	Activities per man
		Number Participating	Per cent Participating	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent		
0	38	15	39	2	5	0	0	0	0	2	5	0	0	1	3	20	.53
1	20	7	35	3	15	1	5	0	0	0	0	2	10	0	0	13	.65
2	51	24	47	3	6	6	12	0	0	1	2	0	0	1	2	11	.22
3	28	12	42	3	11	3	11	0	0	1	4	4	14	0	0	23	.82
4	38	19	50	4	11	6	16	0	0	2	5	1	2	0	0	32	.84
5	15	8	53	2	13	1	7	0	0	0	0	1	7	0	0	12	.80
6	17	6	35	1	6	2	12	0	0	1	6	0	0	0	0	10	.60
7	25	18	72	7	28	3	12	0	0	0	0	0	0	0	0	28	1.12
8	19	12	63	0	0	1	5	0	0	0	0	0	0	0	0	13	.68
9	14	6	43	1	7	3	22	0	0	0	0	0	0	0	0	10	.71
104	35	19	54	4	11	3	8	1	3	2	6	0	0	0	0	29	.83
Summary	300	146	49	30	10	29	10	1	0	9	3	8	3	2	1	201	.67



in dealing with like data from the college. It is shown in Table XVIII.

Here again relatively few significant relationships can be cited. Athletics again claimed the greatest portion of interest, although they did not hold so important a place as in high school. There was less extra-curricular activity than in high school. The college average was sixty-seven hundredths of an activity per man, while it will be remembered that the average figure for the men was one and sixty-one hundredths activities per man (when in high school). The greatest decrease in participation in college over that while in secondary school was shown in dramatic and forensic activities. It is evident from the data in Tables XVII and XVIII that there was a lessening of emphasis placed on extra-curricular activities from high school to college, but no obvious relationship of this extra-curricular activity participation and subsequent length of vocational agriculture teaching experience. It is worth noting that agricultural education trainees do enter into extra-curricular activities both in high school and in college. While the extent of participation for all graduates either in high school or in college is not available it is strongly believed that the above figures for agricultural education graduates would compare favorably with such figures if they were available.

Participation in College Athletics

As pointed out above, athletics constituted the major extra-curricular activity in the pre-employment school experience of all groups. In Table XIX the division of participation in college athletics is indicated. The sports enumerated are those listed in The Pennsylvania State College catalogue. The order of listing is the order of frequency in which these sports were engaged in by students in the curriculum in agricultural education.

The three hundred graduates whose records were studied participated in two hundred and forty-seven athletic activities, an average of eighty-two hundredths of an activity per man. The sports in order of frequency of participation were wrestling, track, baseball, basketball, football, soccer, boxing, tennis, cross country and lacrosse. Other listed miscellaneous sports, out in which practically no interest was shown, were handball, volleyball, horseshoes and fencing. Golf and gymnastics received only an occasional mention.

Approximately one-fifth of the interest and participation in sports centered in wrestling. Except for the six-year group all experience groups showed much the same proportion of interest in wrestling. Another one-fifth of the graduates expressed their interest by participating in college track. Baseball, the third most popular sport, was participated in noticeably more by the teaching groups of long experience.



Table XIX. Participation in College Athletics

Teaching experience	0	1	2	3	4	5	6	7	8	9	10+	Summary	
Number of graduates	38	20	51	28	36	15	17	25	19	14	35	300	Per cent
Participation												247	
Wrestling	7	3	8	5	8	5	1	4	5	4	6	56	22.6
Track	2	4	7	7	6	2	3	8	7	0	6	52	21.0
Baseball	4	1	4	1	2	1	2	5	4	2	6	32	12.9
Basketball	5	2	1	0	4	1	2	1	4	0	4	24	9.7
Football	4	1	3	2	4	1	1	3	1	2	1	23	9.3
Soccer	3	0	3	2	2	3	0	2	0	1	3	19	7.7
Boxing	1	0	5	2	2	0	0	1	1	0	0	12	4.9
Tennis	2	0	1	0	1	0	1	2	0	0	1	8	3.2
Cross country	0	1	1	0	0	1	1	1	0	0	1	6	2.4
Lacrosse	1	0	0	2	1	0	0	1	1	0	0	6	2.4
Miscellaneous*	4	2	1	0	1	1	0	0	0	0	0	9	2.4
Participation per man	.87	.70	.67	.75	.81	1.00	.64	1.00	1.20	.64	.80	.80	

\*Golf, handball, volleyball, fencing, gymnastics, horse-shoes.



The no-experience group took part in all sports slightly more than the average for all graduates and appreciably more than did the groups of less than five years of teaching experience. The five, seven and eight year groups all reached or exceeded an average of one athletic participation per man.

#### Members of College Judging Teams

Intercollegiate judging teams of various kinds have been selected each year by the agricultural school during the period when the graduates involved in this problem were in college. Table XX shows that a goodly number of agricultural education students have participated in the judging team work.

Graduates who have been members of agricultural judging teams tend also to be among the vocational agriculture teachers of longest teaching experience. The teaching experience groups from five years to ten-plus years represented only forty-one and seven-tenths per cent of all graduates studied; however, seventy-eight and four-tenths per cent of the reported judging team participation came from within these groups. No one from among the thirty-eight graduates without teaching experience was ever a member of an agricultural judging team. General livestock and dairy judging appeared most frequently.

#### College Class Offices Held

The college class offices held by graduates in the curriculum in agricultural education and the experience groups to which the graduates belong are indicated in Table XXI. Eleven of the three hundred graduates or less than four in



Table XX. Members of College Judging Teams

	Teaching Experience										
	0	1	2	3	4	5	6	7	8	9	10+
Number of graduates reporting	38	20	51	28	38	15	17	25	19	14	35
Judging Teams		Live-stock	Live-stock Dairy Live-stock Meat			Dairy Live-stock Live-stock	Poultry Poultry Live-stock	Live-stock Dairy Dairy	Live-stock Dairy	Live-stock	Live-stock Fruit Fruit Fruit Dairy
Summary	0	1	4	0	0	3	3	4	2	1	5
58.3% of reporting graduates						41.7% of reporting graduates					
21.6% of judging team						78.4% of judging team participation					

Table XXI. College Class Offices Held

	Teaching Experience										
	0	1	2	3	4	5	6	7	8	9	10+
Number Reporting	38	20	51	28	38	15	17	25	19	14	35
Offices	Freshman Class President  										

Eleven of the 300 graduates reporting held class offices at some time while in college. No graduate reported more than one class office.



one hundred held class offices at any time while in college. No graduate reported holding more than one class office. Since there were so few graduates who held class offices among those whose records were studied, no interpretation can be made of the data. It must be remembered that three hundred graduates taken from approximately fifteen college graduating classes constitute a very small sampling. Therefore, the opportunities for students in agricultural education to hold class offices were limited. The median student body enrollment at The Pennsylvania State College for the period of years when these men were in attendance was probably thirty-five hundred.

Holding a class office is ordinarily considered to contribute to leadership training; a qualification associated with successful teachers. Agricultural education trainees should be encouraged to aspire for class offices and graduates who have held such positions of responsibility are likely to be successful teachers.

#### Membership in Fraternities

Social fraternities, of which there are fifty-seven, play a very important role among students at The Pennsylvania State College. Fifty-two per cent of the men enrolled at the college for the present year belong to social fraternities, and a fifty per cent relationship between fraternity and non-fraternity men has obtained for a number of years. Forty-one per cent of the

three hundred agricultural education graduates whose records are a part of this problem were active members of social fraternities when in college.

Professional fraternities claimed twenty-six per cent of the entire group. Twenty-six per cent were also members of honorary fraternities and societies. The data in Table XXII do not reveal a tendency for the groups of varying teaching experience to be more or less fraternal than other groups. It does show that agricultural education graduates as a whole indulge in social fraternity activities somewhat less than the average for all college students. Living in a social fraternity costs more than being a non-fraternity man. As will be shown in a subsequent chapter, a high proportion of these agricultural education graduates found it necessary to work their way, at least in part, through college. This may account for their lessened participation in social fraternity life.



Table XXII. Membership in Fraternities

Teaching Experience	Graduates Reporting	Social		Professional		Honorary	
		Number	Per cent	Number	Per cent	Number	Per cent
0	38	17	45	14	37	9	23
1	20	7	35	3	15	1	5
2	51	24	47	17	33	11	21
3	28	10	36	5	18	8	29
4	38	16	42	6	16	11	29
5	15	5	33	2	13	4	27
6	17	8	47	6	35	3	18
7	25	11	44	8	32	10	40
8	19	6	32	7	37	4	21
9	14	6	43	4	29	9	64
10+	35	14	40	5	14	8	23
Summary Total	300	124		77		78	
Per cent		41		26		26	



SummaryExtra-Curricular Secondary School Activities

The records of agricultural education graduates showed a participation of 1.61 extra-curricular activities per man when attending the secondary school.

Athletics claimed 63 per cent of their extra-curricular activity interests when in the secondary school.

Owing to the limited facilities for extra-curricular activities existing in most rural high schools, the type of school which more than one-half of the graduates attended, it is impossible to attach much significance to their reported secondary school extra-curricular activity participation.

Extra-Curricular College Activities

When in college, agricultural education graduates participated in .67 extra-curricular activities per man. Forty-nine per cent of this participation was in athletics, 10 per cent in music, 10 per cent in connection with college publications and the remainder in miscellaneous activities.

Twenty-two and six-tents per cent of their college athletic participation was in wrestling, 21.0 per cent in track, 12.9 per cent in baseball, 9.7 per cent in basketball, 9.3 per cent in football and the remaining 34.5 per cent were divided among eleven minor sports.

The average college sports participation for men in all groups of teaching experience was .82 per man. All groups



participated nearly equally and there was no evidence that high or low sports participation was associated with length of teaching experience.

Interest in music, publications, civic, forensic and dramatics activities was distributed without relationship to later lengths of teaching experience.

#### Members of College Judging Teams

Graduates who, when in college, were members of agricultural judging teams tended also to be among the groups of vocational agriculture teachers of longest teaching experience.

#### Membership in Fraternities

Fraternal orders claimed a lower proportion of agricultural education graduates among their members than for the graduates of the college as a whole. There was no indication that social or professional fraternity membership was associated with length of teaching experience. There was some indication that length of teaching experience and membership in an honorary fraternity were associated.

Although no close correlations between participation in extra-curricular activities and length of teaching experience were discovered in the data, students in agricultural education should be encouraged to participate to some extent in extra-curricular activities for the sake of their training in leadership.

## CHAPTER VII

## COLLEGE EXPENSES

The 1931-32 catalogue of The Pennsylvania State College includes the following statement relative to the cost of attending the college:

"It is difficult to estimate the total cost of a year in College. It naturally varies with the style of living and the course pursued. On the basis of the necessary expenses and not to include travel, clothing, entertainment, fraternity and similar outside expenses, total costs for the year may be estimated as follows: economical, \$600; comfortable living, \$700; liberal, \$900."

Students attending The Pennsylvania State College are men and women of moderate circumstances. It is estimated that twenty per cent of them are working for their expenses in part. It is further estimated that twenty to thirty per cent more are attending school on borrowed funds, money which they expect to repay the lender. The small size of the town of State College limits the opportunities offered students for employment. The gradually increasing enrollment has led to a marked tendency for the students either to depend upon their own resources for their college expenses or to come with borrowed funds.

College Expenses of Agricultural Education Graduates

Many of the agricultural education graduates who are now teachers of long experience were in college when the institution was smaller and greater opportunities were afforded students for part-time employment. Table XXIII deals with



Table XXIII. Manner of Meeting College Expenses

Teaching Experience	Number of Graduates	Relatives Assumed All Expenses		Borrowed Funds								Worked Way							
				\$		$\frac{1}{2}$		$\frac{2}{3}$		All		\$		$\frac{1}{2}$		$\frac{2}{3}$		All	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0	38	4	11	8	21	6	16	4	11	2	5	7	18	11	29	7	18	3	8
1	20	3	15	6	30	3	15	3	15	0	0	3	15	5	25	6	30	1	5
2	51	4	8	17	33	11	22	6	12	1	2	13	25	18	35	10	20	5	10
3	28	5	18	4	14	5	18	7	25	0	0	10	36	2	7	3	11	0	0
4	38	8	21	10	26	10	26	4	11	1	2	7	18	12	32	6	16	2	5
5	15	3	20	2	13	3	20	4	27	2	13	5	33	3	20	2	13	0	0
6	17	1	6	5	29	5	29	1	6	0	0	5	29	4	24	4	24	0	0
7	25	4	16	7	28	4	16	5	20	0	0	10	40	5	20	4	16	0	0
8	19	2	11	2	11	5	26	2	11	0	0	4	21	4	21	2	11	1	5
9	14	1	7	1	7	4	29	1	7	0	0	2	14	5	36	3	22	0	0
10+	35	3	9	11	31	7	20	2	6	0	0	3	9	12	34	12	34	2	6
Summary Total	300	33		73		63		39		6		69		81		59		14	
Per cent		13		24		21		13		2		23		27		20		5	



the manner whereby students in the curriculum in agricultural education met their college expenses.

Thirteen per cent of them had their entire expenses paid, presumably by their parents or other relatives. This figure is about one-fourth of the estimated figure for the college as a whole. There appears to be a marked relationship between the length of teaching experience and the extent to which college expenses were assumed for them. Seventeen and two-tenths per cent of the teachers in experience groups from one to five years had all college expenses assumed by relatives, while only nine and eight-tenths per cent of the teachers in experience groups from six to ten-plus years were relieved of all responsibility for their college finances. We are led to believe from these figures that the necessity of borrowing funds and of working one's way in college is conducive to long teaching experience in the case of trainees in agricultural education.

Using the estimated costs of a year in college as quoted above from the catalogue, twenty-four per cent borrowed seven hundred dollars, twenty-one per cent borrowed fourteen hundred dollars, thirteen per cent borrowed twenty-one hundred dollars and two per cent borrowed twenty-eight hundred dollars to apply on their college training. When the graduates are considered as belonging to two experience teaching groups, those with one-to-five-years of experience and those with six-to-ten-plus years of experience, it is shown that the graduates



of low teaching experience borrowed approximately twenty per cent less of their college funds than did the graduates of high teaching experience.

In making a similar comparison of the extent to which they worked their way through college, less difference appears between the groups, although the high teaching experience group did outrate the low teaching experience group approximately five per cent in the matter of working their way.

#### Receipt of Scholarship

Two hundred and fifty-six scholarships are described in the catalogue of The Pennsylvania State College as available to students in The School of Agriculture. They vary in stipend from forty-five dollars to two hundred and fifty dollars annually. The average stipend is approximately one hundred dollars a year. Some are for one year only; others are for four years. Many of these scholarships are assigned competitively, although the greater number of them are designated as senatorial scholarships, being awarded annually by state senators to residents of their districts. Senatorial scholarships bear a stipulation that their holders must earn a number of grade points larger by two than the number of credit hours on their year's schedule, otherwise said scholarship will be revoked. To this extent the senatorial scholarships are an earmark of intellectual attainment.

In the request to the agricultural education graduates for information concerning their pre-employment background,

it was asked, if when in college they had been recipients of scholarships, and if so the nature of the scholarship. A number of scholarships were reported that no longer exist and about which limited information could be secured. The rehabilitation scholarships, of which there was an almost unlimited number following the World War, have not existed since 1924. Numerous organization endowment scholarships reported as received by graduates are no longer in existence. Among these were Farmers' Institute scholarships, Masonic scholarships, church and Young Men's Christian Association scholarships. Some individual endowments ceased because of defaulted earnings. Athletic scholarships which existed in generous numbers during the earlier years were eliminated by the college.

It was difficult to classify the reported scholarships both as to their nature and extent. In Table XXIV they are described, as senatorial, rehabilitation, individual endowments, organization endowments and athletic scholarships.

Thirty-one persons or ten per cent of all graduates received senatorial scholarship appointments. It may be noted that more than two-thirds of the senatorial scholarships were held by the low teaching experience groups, men teaching four or less years.



Table XXIV. Receipt of Scholarship

	Teaching Experience											Summary
	0	1	2	3	4	5	6	7	8	9	10+	
Number of graduates reporting	38	20	51	28	38	15	17	25	19	14	35	300
Number receiving scholarships	3	6	12	9	5	0	2	3	3	2	6	51
Per cent receiving scholarships	8	30	23	32	13	0	12	12	16	14	17	17
Type of scholarship												
Senatorial	2	5	7	7	4	0	0	2	2	0	2	31 10%
Rehabilitation	0	0	2	0	0	0	0	1	1	0	1	5 2%
Individual Endowment	0	1	2	0	0	0	1	0	0	1	2	7 2%
Organization Endowment	1	0	1	0	0	0	0	0	0	1	1	4 1%
Athletic	0	0	0	2	1	0	1	0	0	0	0	4 1%

Athletic scholarships were held by four graduates. All of them taught vocational agriculture after leaving college but none are at present reported as employed in the work.

Seven students merited individual endowment scholarships. Upon graduation all of them found employment as teachers of vocational agriculture and all are still employed in the work. This type of scholarship is the most competitive, requiring of the recipient more of the teacher qualifications than do the other kinds of scholarships.



SummaryCollege Expenses of Agricultural Education Graduates

Thirteen per cent of the graduates in agricultural education had all their college expenses paid for them.

Twenty-four per cent borrowed one-fourth of the funds, 21 per cent borrowed one-half, 13 per cent borrowed three-fourths, and 2 per cent borrowed all the necessary funds for college expenses.

Twenty-three per cent worked for one-fourth, 27 per cent worked for one-half, 20 per cent worked for three-fourths, and 6 per cent worked for all of their college expenses.

Seventeen and two-tenths per cent of the graduates in the lower teaching experience groups, in contrast to 9.8 per cent of those in the higher experience groups, assumed no responsibility for earning their college expenses.

Borrowing money to go to college or working one's way is conducive to becoming a successful teacher of vocational agriculture. For those who are able to do so, it is more desirable to borrow a part of the funds than to devote a great amount of time to working while in college.

Receipt of Scholarships

Ten per cent of all graduates in agricultural education attended college on a senatorial scholarship. More than two-thirds of these scholarships were held by men in the low teaching experience groups, men with experience below the

average years for all vocational agriculture teachers in the state.

Individual endowment scholarships are competitive and their requirements are higher than for most other existing types of scholarships. Two-thirds of the men who earned this type of scholarship are in the upper one-half of the experience groups and all have continued to teach vocational agriculture.



## CHAPTER VIII

## COLLEGE SCHOLASTIC ACHIEVEMENTS AND FAILURES

A number of studies have shown varying degrees of relationship of college success, based on scholastic grades, with teaching success. The average of correlations determined by six research workers<sup>1</sup> mentioned in the footnote is .305. while the techniques and degrees of thoroughness of these authors varied, the average of their correlations does reveal a measure of importance which may be attached to college grades in predicting teaching success.

---

<sup>1</sup> Knight, F. B. "Qualities Related to Success in Teaching." Teachers College, Columbia University, Contributions to Education, No. 120. New York: Bureau of Publications, Columbia University, 1922.

Meriam, J. L. "Normal School Education and Efficiency in Teaching." Teachers College, Columbia University, Contributions to Education, No. 1. New York: Bureau of Publications, Columbia University, 1906.

Morris, Elizabeth M. "Personal Traits and Success in Teaching." Teachers College, Columbia University, Contributions to Education, No. 342. New York: Bureau of Publications, Columbia University, 1929.

Somers, G. T. "Pedagogical Prognosis." Teachers College, Columbia University, Contributions to Education, No. 140. New York: Bureau of Publications, Columbia University, 1923.

Ullman, R. R. "The Prognostic Value of Certain Factors Related to Teaching Success." Ashland, Ohio: A. L. Garber Co., 1931.

Whitney, F. L. "The Prediction of Teaching Success." Journal of Educational Research Monographs, No. 6. Bloomington, Illinois: Public School Publishing Co., 1924.



In order to study the scholastic achievements of graduates in agricultural education the subjects required in their curriculum have been divided according to six general headings: physical sciences, biological sciences, social sciences, technical agriculture, professional courses and humanities. English is the only required subject in the latter group and therefore in the tables is designated as English.

The grading system in use at the college is as follows: 3 (90-100), 2 (80-89), 1 (70-79), 0 (60-69), -1 (45-59), and -2 (0-44). A minus grade is a failure and the subject must be repeated in course. However, a -1 may permit a student to continue a course for which the failed course is a pre-requisite.

In order to be eligible for graduation, students must have grade points equal in number to the credits required for the degree. Grade points are determined by multiplying the grade earned by the number of credits for the subject, i.e., Psychology 14, 3 credits, with a grade of 2, is equivalent to 6 grade points. In substance this means that, although 0 is a passing grade, an average of 1 is required for graduation.

Table XXV contains the grade point averages earned by graduates in agricultural education in the groups of subjects mentioned below. A few of the older students were in college prior to the adoption of the grade point system. Their records appeared in the registrar's office in percentages, and, to make them comparable, were translated into grade point averages.



Table XXV. College Grade Point Averages

Teaching Experience	Number of Graduates	Physical Sciences	Biological Sciences	Social Sciences	Technical Agriculture	Professional Courses	English	All Undergraduate Work
0	38	1.03	1.27	1.36	1.62	1.30	1.11	1.42
1	20	1.02	1.28	1.33	1.59	1.74	1.02	1.37
2	51	.85	1.18	1.42	1.71	1.72	1.05	1.38
3	28	1.10	1.21	1.25	1.78	1.98	1.10	1.47
4	38	1.13	1.34	1.43	1.65	1.79	1.22	1.49
5	15	.72	.93	1.16	1.40	1.28	.72	1.19
6	17	1.32	1.57	1.52	1.84	1.89	1.27	1.70
7	25	.85	1.31	1.16	1.63	2.01	1.00	1.40
8	19	.95	1.25	1.24	1.53	1.95	1.14	1.36
9	14	1.17	1.43	1.44	1.70	1.92	1.41	1.58
104	35	1.17	1.45	1.51	1.73	1.90	1.17	1.49
Summary	300	1.02	1.29	1.35	1.65	1.73	1.11	1.44
College Averages, 1931-32		.88	1.18	1.43	1.47	1.61	1.21	1.40



Grade Point Averages

It will be remembered from Chapter V that agricultural education students ranked below the average for the college in native intelligence. However, they expressed their native ability in terms of college grade point averages earned to a higher degree than the all college group shown in the table. College averages were not available for the series of years with which we are concerned, but it is believed that the college year 1931-32 may be considered a representative base year to use for comparison. The all-undergraduate grade point average for agricultural education students was 1.44, and for all students attending the college during the school year mentioned it was 1.40.

A glance at the table reveals a strong tendency for the grade point averages for all undergraduate work to increase with the increase in teaching experience. The figure for the first two teaching experience groups dropped sharply below the average. The average for the first five teaching experience groups was 1.38 in contrast with a similar figure computed for the last five teaching experience groups, which was 1.51.

Physical sciences constituted the most difficult subjects in all the curricula of the college, if the grade point averages earned by the students are used as the criteria. The average for the college in physical sciences was .88, which is decidedly below the average grade of 1 required for graduation. Agricultural education students with a grade point figure of



1.02 ranked slightly higher than the college requirement. There was no indication of a trend in difficulty for physical sciences through the teaching experience years.

In biological sciences agricultural education graduates had a somewhat better record than in the physical sciences, although they did not come up to their all-undergraduate work average. Their biological science average of 1.29 again exceeded the college average, which was 1.18. There was a slight indication that higher biological science grades were associated with the longer teaching experience groups, particularly the nine and ten-plus years.

Social sciences showed further improvement in grade point averages for agricultural education students, although they fell below the all-college average for this group of subjects. There was no marked tendency for high or low grades to be associated with length of teaching experience.

Agricultural education students made much higher grades in courses in technical agriculture than the average for all agricultural students. Their grade point average was 1.65 in contrast to 1.47 for all students. This may partly be attributed to the high proportion of farm reared men who enroll in the curriculum in agricultural education. They may also have been motivated to do better work in the technical agriculture subjects because of an assurance that teaching the subject demands a mastery of it. All teaching experience groups seemed about equal in grade point averages earned in



courses in technical agriculture.

in the professional courses, which included psychology, principles of teaching, special methods and practice teaching, agricultural education students earned their highest grade point averages. The average for all groups was 1.73. It is largely through this group of subjects and the subjects in technical agriculture that agricultural education students elevated their general grade point average. These are the only two general groups of subjects where their grade point averages exceeded their average for all undergraduate work, or that of all college students. There is positive evidence that grades earned in professional courses are closely associated with length of teaching experience. The no-experience group of graduates earned only 1.30 grade points. Teachers in groups with one to five years of teaching experience averaged 1.70 grade points in professional courses, and teachers in the groups of greatest experience, six years to ten-plus years, averaged 1.95 grade points in their professional courses.

English was the only required humanity subject. In difficulty measured in grade point averages it ranked next to the physical sciences for agricultural education students. Here, as in the case of the professional courses, graduates with the longest teaching experience also showed on their records the highest grade point averages in English. Teachers in



groups with one to five years of teaching experience averaged only 1.02 grade points in English, but teachers in groups with six to ten-plus years of teaching experience averaged 1.19 grade points in their English courses. The best single teaching experience group with respect to English was the nine-year group with a group grade point average of 1.41. The all-college average for English was 1.21 grade points. English, the means of our communication and expression, is basic to teaching, and the above data support the contention that without a fair degree of mastery of English, teachers are not likely to be highly successful, regardless of their mastery of their special subject.

It appears that, while agricultural education students have as a group come to college possessed of less native ability than average college students (Table XV), they have through hard work and seriousness of purpose achieved more than their colleagues when interpreted in terms of grade point averages. In placing emphasis on scholarship the fact must not be lost sight of that the teacher may possess qualities that compensate for low scholarship and that many such teachers find a success of their work. The teacher's attitude toward his work, his ability to discriminate in the selection and organization of subject matter, his understanding and appreciation of human nature and his sense of cooperation are among these many compensating factors.



### College Honors

At each commencement at The Pennsylvania State College certain students are designated as graduating with honors. "First honors" are conferred upon five per cent of the graduating class, providing they possess high general scholarship and also that their grade point averages are not below 2.4.

"Second honors" are conferred upon the remainder of the upper fifteen per cent of the graduating class, providing also that they are of high general scholarship and that their grade point averages are not below 2.0.

Among the three hundred agricultural education graduates whose records were examined, sixteen graduated with first honors and thirty-nine with second honors. Fifty-five or nearly one-fifth of the graduates, received honors.

Since honors are largely dependent upon scholarship, and since it has been shown that agricultural education students outrank the average for the college in scholarship, it is not surprising to find so large a proportion of agricultural education graduates among the honor students. There was an evident tendency for the percentage of honor students to increase as the group increased in teaching experience. Twenty-nine per cent of the ten-plus years group were honor students when in college. Only fifteen per cent of the one year group received the distinction. Each group contained the records of practically the same number of teachers.



Table XXVI. College Honors

	Teaching Experience													Summary
	0	1	2	3	4	5	6	7	8	9	10+			
Number of graduates reporting	38	20	51	28	38	15	17	25	19	14	35	300		
First Honors Number	3	0	1	2	1	0	3	0	1	2	3	16		
Per cent	8	0	2	7	3	0	18	0	5	14	9	5		
Second Honors Number	3	3	3	3	8	1	0	4	3	4	7	39		
Per cent	8	15	6	11	21	7	0	16	16	29	20	13		
Total Honors Number	6	3	4	5	9	1	3	4	4	6	10	55		
Per cent	16	15	8	28	23	7	18	16	21	43	29	18		

### Scholastic Failures

The same classification as was used to record grade point averages was used to record scholarship failures. College subjects were grouped according to physical sciences, biological sciences, social sciences, technical agriculture, professional courses and English.

Physical sciences, which in Table XXV showed the lowest grade point average, also show in Table XXVII the greatest number of subject failures. Three hundred and seventy-two physical science courses, or an average of one and twenty-four hundredths courses per graduate, were failed. English and biological sciences tied for second greatest number of failures per man, averaging sixty-nine hundredths of a course failure. Professional courses showed the least failures per man. Most of the failures in professional courses were in introductory psychology. A total of one thousand and fifty-seven credits were failed by agricultural education graduates in all subjects. This was an average of three and fifty-two hundredths credits per individual.

The greatest failures were associated with the short teaching experience groups and the fewest failures with the graduates of long teaching experience, although in certain isolated groups an exception appeared; for example, the three-year group averaged only two and seventy-five hundredths failures per man, while the eight-year group averaged five



Table XXVII. Scholarship Failures

Teaching Experience	Number of Graduates	Physical Sciences		Biological Sciences		Social Sciences		Technical Agriculture		Professional Courses		English Courses		Summary	
		No.	per man	No.	per man	No.	per man	No.	per man	No.	per man	No.	per man	No.	per man
0	38	66	1.74	27	.71	12	.32	19	.5	18	.47	18	.47	160	4.21
1	20	39	1.95	16	.80	3	.15	20	1.00	6	.30	9	.45	93	4.65
2	51	76	1.29	34	.67	3	.06	14	.27	3	.06	60	1.18	190	3.73
3	28	15	.54	26	.93	3	.11	9	.32	3	.11	21	.75	77	2.75
4	38	25	.66	38	1.00	9	.24	21	.55	15	.79	30	.79	138	3.63
5	15	40	2.67	16	1.07	6	.40	10	.67	6	.40	13	.67	91	6.07
6	17	2	.12	4	.24	0	0	7	.41	3	.18	6	.36	22	1.29
7	25	38	1.52	16	.64	13	.52	10	.40	3	.12	9	.36	89	3.56
8	19	34	1.79	17	.89	12	.63	17	.89	3	.16	21	1.11	104	5.47
9	14	13	.93	12	.86	0	0	4	.29	0	0	3	.21	32	2.29
104	35	24	.69	2	.06	6	.17	8	.23	3	.09	18	.51	61	1.46
Summary	300	372	1.24	208	.69	67	.22	139	.46	63	.21	208	.69	1057	3.52



and forty-seven hundredths failures per man. By striking an average of groups from one to five years and groups from six to ten-plus years, it was shown that the short experience teachers had four and seventeen-hundredths failures per man, and the long experience teachers had two and eighty-one hundredths failures per man.

The group with no teaching experience averaged slightly more failures per man in all groups of subjects except in English, where they failed only about two-thirds as many courses. There was little evidence that failures in physical sciences, biological sciences, social sciences and technical agriculture were associated with length of teaching experience. However, in professional courses, when the low experience groups were averaged, they had twenty-five hundredths failures per individual in contrast to eleven-hundredths failures per individual among the long experience graduates, those having taught six or more years.

In English the data revealed similar significance. Groups with teaching experience ranging from one to five years had on their records eight-tenths of a failure per man in English, while those with teaching experience ranging from six to ten-plus years had only five-tenths of a failure per man in English.



SummaryGrade Point Averages

The mean grade point average for all undergraduate work of agricultural education students was 1.44. The mean for the college year 1931-32, the year selected as a base for comparison, was 1.40.

Measured in terms of grade point averages the groups of subjects arrange themselves from most difficult to least difficult in the following order, - physical sciences, English, biological sciences, social sciences, technical agriculture and professional courses.

In general the grade point averages for all undergraduate work increased with the increase in teaching experience of the groups.

Evidence of an existing relationship between achievement in college subjects and length of teaching experience appeared with professional courses and also with English.

College Honors

One-fifth of the students in agricultural education graduated with college honors, the percentage of honor students in the group increased with the teaching experience of the group.

Scholastic Failures

Course failures per individual among agricultural education graduates occurred in the designated groups of

subjects as follows: physical sciences, 1.24; biological sciences, .69; english, .69; technical agriculture, .46; social sciences, .22; and professional courses, .21.

The average total failures per individual were 3.52. The short teaching experience groups averaged 4.17 failures per individual. The long teaching experience groups averaged 2.81 failures per individual.

Failures in professional courses and in English were most closely associated with length of teaching experience. In the professional courses the short teaching experience groups averaged .35 of a course failure per man and the long teaching experience groups averaged .11 of a failure per man. In English the short teaching experience groups averaged .80 of a failure per man, while the long teaching experience groups averaged only .50 of a failure per man.



## CHAPTER IX

## SALARIES AND SALARY INCREMENTS

Teaching Experience and Salary Increments

An examination of the salaries paid to teachers of vocational agriculture in Pennsylvania revealed the fact that for the teaching experience periods studied there was a continuous increase in average annual salaries and increments. The average first-year salary for two hundred and fifty-nine teachers, the number for whom salary data were secured, was \$2,119.67.

This initial salary was followed by a continuous succession of increments, the largest of which came with the third year of employment. This increment was \$180.76 or an eight per cent increase over the second-year salary. The mean increment for all all experience groups was \$80.78, a yearly increase of three per cent. From Table XXVIII it is apparent that salary and salary increases were contingent upon teaching experience. Furthermore, that increments continued year after year through the ten experience groups, and that evidently the average teacher of vocational agriculture in Pennsylvania did not reach a maximum or fixed-level salary before at least his tenth year of teaching experience.

Table XXVIII. Average Annual Salaries and Yearly Increments of Vocational Agriculture Teachers in Pennsylvania

Teaching Experience	Number of Teachers	Average Annual Salaries	Average Annual Increments	Per cent Increase
1	259	\$2,119.67		
2	239	2,204.39	\$ 84.72	4
3	188	2,385.15	180.76	8
4	160	2,491.68	106.53	4
5	122	2,552.15	60.47	2
6	107	2,635.18	83.03	3
7	90	2,714.80	79.62	3
8	65	2,760.00	45.82	2
9	46	2,832.15	72.15	2
10+	32	2,927.50	95.35	3
Mean			\$ 80.78	3



Pre-Employment Background Factors Related to Salary and Increments

The principal purpose for inserting a consideration of salaries and salary increments at this place in the study is to emphasize the significance of certain pre-employment background factors pertaining to the teacher of vocational agriculture, factors that have been mentioned in earlier chapters in connection with the teaching experience groups. In other words, conclusions drawn from a study of teachers' salary increments, which are not infrequently used as one measure of teaching success and efficiency, may strengthen the contention that certain pre-employment factors repeatedly referred to are indicative of the probable success of a teacher trainee.

In Table XXIX the annual salary increments of teachers of vocational agriculture are divided into eight twenty-five dollar intervals of increase, ranging from no increase to two hundred dollars. The per cents of teachers possessing various pre-employment background characteristics are indicated in the table according to their annual salary increments.

The per cent of teachers who attended the rural elementary school decreased as the annual salary increments increased. Ninety-eight and eight-tenths per cent of those who received the lowest mean increments also received their elementary education in the rural schools. Seven and two-tenths per cent of this group attended an urban elementary school. Contrasting



Table XXIX. Relation of Certain Pre-Employment Background Factors to Salary Increments

Per cent	Annual Salary Increments							
	\$ 0-24	\$25-49	\$50-74	\$75-99	\$100-124	\$125-149	\$150-174	\$175-200
Attended rural elementary school	98.8	88.8	83.3	71.4	91.7	83.3	55.5	42.8
Attended urban elementary school	7.2	11.2	16.6	28.6	8.3	12.7	44.5	57.2
Attended rural secondary school	57.1	66.6	50.0	42.8	50.0	66.6	44.5	42.8
Attended urban secondary school	42.9	23.2	40.0	47.6	50.0	33.3	66.6	57.2
Farm reared	85.7	83.3	90.0	71.4	79.1	83.3	88.8	88.8
Spent 2 or more summers on farm during college years	71.3	55.5	76.6	71.4	70.8	83.3	88.8	71.4
With I.Q. scores below 95.7	57.1	61.1	66.3	77.7	66.6	50.0	33.3	0
Borrowed $\frac{1}{2}$ or more funds for college	35.7	50.0	33.3	19.0	37.5	66.6	55.5	57.2
Worked way $\frac{1}{2}$ or more in college	63.5	44.4	60.0	42.8	62.5	66.6	45.5	28.5
With grade point averages above 1.44	50.0	55.5	50.0	42.8	50.0	50.0	88.8	42.8
Failed 6 or more credits	50.0	27.7	33.3	28.5	25.0	33.3	0	0



with these two figures and further emphasizing the elementary school training as a factor, is the fact that fifty-seven and two-tenths per cent of those who received the highest salary increments attended urban elementary schools. The rest attended rural schools. One irregularity in the distribution which cannot be explained appeared for those in the \$100-\$124 increment class. This class seemed to compare in elementary schooling with the class receiving the lowest increments.

In the figures concerning the secondary school attendance the evidence again favors the urban schools. Generally speaking, the higher average salary increments were earned by teachers whose records showed attendance at the urban high school, and lower average salary increments were associated with teachers who attended the rural high schools.

A slightly larger proportion of the recipients of high salary increments was farm reared than were those who received the lower annual increases. There was also a tendency for the higher paid groups to have spent more summers on the farm during their college years.

The table records the per cent of those with intelligence quotient scores below 95.7. This score was selected because it was the average intelligence quotient score for all agricultural education graduates. No appreciable difference was found to exist between the average intelligence scores of the lower paid groups. It will be noticed, however, that teachers

with average increments of one hundred and twenty-five dollars or more a year were also above the average in intelligence, and that none of the teachers receiving increments of one hundred and seventy-five dollars or more had intelligence ratings below the average for all teachers in the study.

The teachers of largest annual increments showed a very slight tendency to have borrowed more of their necessary college capital.

A grade point average of 1.44, the average for all the undergraduate work of those whose records were studied was made the basis of grade point comparison. The per cent of failures seemed to bear more significance than did grade point averages. In Table XXVII it was found that the average graduate in agricultural education failed three and fifty-two hundredths credits of work. Six credits, the equivalent of two average subjects, was used in Table XXIX as the basis of comparing the salary increments groups with scholarship failures. It will be noted by referring to the table that, as the salary increments increased, the per cent of failures decreased, and that the last two high increment groups did not show any failures in excess of six credits.



SummaryTeaching Experience and Salary Increments

The average first year salary for teachers of vocational agriculture was \$2,119.67.

The mean average annual increment for succeeding years was \$80.78 or a mean annual increase of 3 per cent. The greatest per cent increase, 8 per cent, came the third year.

Pre-Employment Background Factors Related to Salary Increments

The percentage of those who attended the rural elementary school decreased as annual salary increments increased.

Higher average salary increments were earned by teachers who had attended urban high schools than by those who have attended rural high schools.

A slightly larger proportion of high salary increments was paid to farm reared teachers than to those who were not farm reared.

All teachers receiving the highest salary increments were average or above average in intelligence.

The greater the per cent of scholastic failures on the part of the trainees the lower were their teaching salary increments.

## CHAPTER X

## TEACHER TRANSIENCY

Teaching Experience and Teacher Transiency

A transiency figure, the mean number of years of service rendered by each teacher in all his teaching positions, was computed for the members of each experience group. For example, a teacher in the group with nine years of experience has held four different positions. His tenure in each position was as follows; one year two years, three years and three years. The average of these four teaching tenures is two and twenty-five hundredths years. This figure represents his average transiency. Similarly, a transiency figure was computed for other teachers in the nine year group. An average transiency figure shown in Table XXX was then computed for each of the ten teaching experience groups.

The mean average transiency for all groups was three and three-hundredths years. The average transiency decreased in regular succession as the years of teaching experience by groups increased. Teachers of long experience do not change positions as readily or as frequently as do the less experienced teachers. The significance of this fact is further brought out in Table XXXI, which deals with the relationship of certain pre-employment background factors and the matter of teacher transiency.



Table XXX. Experience and Transiency of Teachers of Vocational Agriculture

	Teaching Experience										Summary
	1	2	3	4	5	6	7	8	9	10+	
Number of teachers reporting	20	51	28	38	15	17	25	19	14	35	262
Average transiency	1	1.75	2.17	2.46	2.72	2.80	3.40	4.11	4.95	5.02	3.03

Definition:-

"Transiency" is measured by the mean number of years of service rendered by each teacher in all his teaching positions.

Table XXXI. Relation of Certain Pre-Employment Background Factors to Teacher Transiency

Per cent	Degree of Transiency					
	1-1.9 years	2-2.9 years	3-3.9 years	4-4.9 years	5-5.9 years	6 or more years
Attending rural elementary school	73.6	72.1	80.7	74.0	88.8	100.0
Attending urban elementary school	22.4	27.9	29.3	26.0	11.2	0
Attending rural secondary school	36.8	54.1	50.0	48.1	66.6	65.0
Attending urban secondary school	63.3	45.9	50.0	51.9	33.3	35.0
Farm reared	94.7	75.4	88.4	70.3	77.7	100.0
Spent 2 or more summers on farm during college years	78.9	83.6	88.4	74.0	77.7	95.0
With I.Q. scores below 95.7	100.0	76.2	63.3	54.8	33.3	10.0
Borrowed 2 or more funds for college expenses	36.8	44.2	46.1	29.6	44.4	20.0
With grade point averages above 1.44	42.1	54.1	57.7	62.9	74.4	85.0
Failed 6 or more credits	36.8	29.5	19.2	22.2	22.2	15.0



Pre-Employment Background Factors Related to Teacher Transiency

For tabular purposes degrees of transiency were set up for each one-year interval up to six years. Very few teachers had a transiency figure beyond six years; therefore it was deemed advisable not to carry out the ten group plan used in most of the previous tables, but to place all those beyond six years in one group. The background factors selected and used in Table XXIX in connection with salary increments were also studied in connection with transiency.

Teachers trained in the rural elementary schools showed a much lower degree of transiency than did teachers who received their elementary school training in urban centers. In other words, the teacher who attended the rural elementary school remained longer in his teaching positions than did the teacher who attended the urban elementary school. Similarly, the rural secondary school attendance was conducive to decreased average transiency and urban secondary school attendance to higher average transiency.

Whether or not the teacher was farm reared did not reveal any positive association with his average transiency. Neither was there any relationship between the number of summers spent on the farm during college years and transiency.

Intelligence scores below 95.7 indicated those of least native ability, this being the mean score for all agricultural education graduates. A very close relationship is shown by

the table between intelligence scores and the degree of transiency. Those whose positions changed most frequently, thus indicating a higher transiency, also made the lowest intelligence ratings. One hundred per cent of the teachers in the group with the highest transiency had intelligence quotients below the average. Only ten per cent of the teachers whose records appeared in the group having the lowest transiency were of low intelligence.

Teachers of all degrees of transiency seemed to borrow about the same proportion of the funds required to attend college. A few more of the low transiency group worked their way through college than did graduates whose positions changed more frequently.

Except for the six year group there was a slight gradual increase in grade point averages as transiency became lower. Scholastic failures offered a more significant indication of relationship with transiency than did scholastic achievements. The per cent who failed six or more credits of work rapidly and steadily decreased, with that group indicating the least transiency.



## Summary

### Teaching Experience and Teacher Transiency

The mean average transiency for all groups of teachers was 3.03 years. Increased teaching experience was accompanied by a lower average transiency.

### Pre-Employment Background Factors Related to Teacher Transiency

Teachers trained in the rural elementary and rural secondary schools changed teaching positions less frequently, thus indicating a lower average transiency than did teachers trained in the urban elementary and secondary schools.

The data revealed no relationship between teacher transiency and the factors of being farm reared or of gaining summer farm experience.

Teachers of the lowest intelligence showed the greatest amount of transiency in their teaching positions.

The higher the grade point averages earned by the teachers when in college the less frequently the change in their teaching positions.

The greater the per cent of scholarship failures when a trainee, the higher the degree of transiency when becoming a teacher.

## CHAPTER XI

## SUMMARY AND CONCLUSION

Limitations

In the mass of data presented in the previous chapters of this thesis reference has been made to some of the limitations in the development of the problem. These limitations with others are here summarized:

1. Approximately 25 per cent of the former graduates in agricultural education either could not be located or did not reply to the questionnaire.
2. The registrar's records were incomplete for certain elements in the data. High school index numbers were available for schools from which only 98 of the agricultural education graduates came. Intelligence scores were available for only 103 of the graduates in this curriculum.
3. At the time when many of the graduates included in the problem were in secondary schools and college, extra-curricular activities were not as highly organized as during recent years.
4. Occupational changes of the parents during and subsequent to the enrollment of their sons in college were not noted.
5. The data to some extent are necessarily subjective.



6. Factors exist in every teacher's preparation and qualifications which may compensate for the lack of other factors. Therefore, the desirable pre-employment background factors determined through this research problem are limited in their prediction of teacher success.

#### Advantages

While there are limitations to the present study, there are also definite advantages.

1. All graduates in the curriculum in agricultural education were asked to participate in the study. The number of cases included was limited by the number of responses. Therefore no sampling technique was necessary.
2. The data were state-wide and covered the program in vocational agriculture education in Pennsylvania since its inception.
3. A large part of the data was based upon official transcripts and permanent records.
4. The study utilized some factors which are available prior to the trainee's entrance to the curriculum in agricultural education. These factors should prove an aid in directing and guiding the decisions of students who may be considering teacher preparation in agricultural education.

5. The study develops other success predictive factors which should be an aid to teacher placement and teacher employment.
6. Teacher success interpreted in terms of length of teaching experience formed the principal basis of the problem. Reference was also made to teacher transiency and to teachers' salary increments as added indications of teacher success.

#### Summary

The findings were briefly summarized at the close of each chapter. The following are certain general findings:

1. College preparatory education has various relations to teacher success. The following are the most outstanding:
  - a. More than two-thirds of the graduates attended the rural elementary schools. There was no evidence in the data of any relationship between rural school attendance and length of teaching experience. When measured against salary increments, the percentage of those who attended the rural elementary schools decreased as annual salary increments increased. On the other hand, teachers trained in the rural elementary schools showed a slightly lower average transiency than did



teachers who did not attend rural elementary schools.

b. The graduates were almost equally divided in their attendance at rural and urban secondary schools. As in the case of the elementary school, there was also no marked evidence from the data that the type of school or length of attendance bore a relation to the length of teaching experience. Slight differences were displayed in salary increments favoring teachers with urban secondary school training.

c. Graduates who attended Class A high schools (classification based upon index numbers computed by The Pennsylvania State College for schools sending graduates to the college) had longer average teaching experience than graduates who attended high schools of lower classification. Since a high proportion of the Class A schools are urban, the evidence favors the urban school for preparatory training for teachers of vocational agriculture.

2. Four-fifths of the agricultural education graduates were farm reared and two-thirds of the fathers were actually engaged in farming at the time their sons enrolled in college. The factor of being farm reared is closely related to length of teaching experience.

As the length of teaching experience increased, the per cent of farm reared teachers within the experience groups increased. Slightly larger salary increments were paid to farm reared teachers of vocational agriculture than to those not farm reared. Teachers of longest experience took advantage of the opportunity to spend more of their college summers on the farm than did those of shorter teaching experience. This may be taken as one evidence of their genuine interest in the farm and farming problems.

3. Mothers were more encouraging to the sons in their college ambitions than were the fathers. Graduates of longest teaching experience received one-third more parental encouragement than others.
4. Length of teaching experience was more closely associated with early decisions to prepare for teaching than when decisions were delayed.
5. Graduates with teaching experience records over five years showed higher intelligence quotients than teachers in the lower experience groups. All teachers receiving the highest salary increments were above the average in intelligence. Teachers of low degree of intelligence showed a tendency to change positions more frequently than did those of higher native intelligence.



6. Agricultural education graduates participated freely in extra-curricular activities both when in high school and in college, but no significant relationship between this participation and their length of experience as teachers of vocational agriculture was revealed.
7. Only about one-tenth of the graduates in agricultural education had all of their expenses paid for them when in college. Of the remaining nine-tenths about one-half borrowed their funds and one-half worked their way. In length of teaching experience there was slight evidence favoring those who did not have their expenses paid for them. Those who borrowed money ranked higher, particularly in the matter of salary increments, than did those who worked their way.
8. The teaching groups of longest experience earned the highest grade point averages in all undergraduate work. Grades earned in professional courses showed a particularly close relationship to the length of teaching experience.
9. The short teaching experience groups averaged the most scholastic failures. The greater the per cent of scholastic failures the higher the degree of transiency and the lower the annual salary increments.

### Conclusion

Teacher success may be measured in many different ways and, no doubt, depends upon many factors. Length of teaching experience was used in this particular problem as the basis for most of the consideration. Two chapters were devoted to a study of the average annual salary increments paid to teachers and to degrees of teacher transiency.

Numerous factors related to teacher success were applied to the data. None should be considered alone for predictive purposes, although, collectively they are significant. No claim is made that all the factors were studied, nor that the conclusions drawn are all-inclusive or all-exclusive. From the factors studied certain conclusions are drawn with reasonable assurance that they are of value for general predictive purposes, and that their application will assist and guide both teacher trainers and teacher trainees in vocational agricultural education.

1. As is the case with a great many vocations, a thorough elementary and secondary school training is fundamental in the preparation to become a teacher of vocational agriculture. Urban or consolidated rural elementary schools offer pupils the highest advantages. Urban secondary schools rank highest in curriculum offerings and in Pennsylvania State College index numbers. students



presenting themselves as trainees in agricultural education are less likely to become successful teachers of vocational agriculture if their college preparatory education has been received in the rural elementary school (particularly the one-room school) and the small rural high school.

2. To understand and be in sympathy with farm life is an admitted requisite for a successful teacher of vocational agriculture. To be farm reared is the most certain way to acquire this appreciation for farming and farm problems. Trainees in agricultural education who are farm reared and who take every opportunity to extend their farm experience, such as by spending the summers on a farm during their college years are most likely to become successful teachers.
3. Indecision evidenced by a student's changing from one college curriculum to another is undesirable. It is often indicative of low scholarship and of a lack of seriousness of purpose. It is a quality which may continue after graduation, lessening the effectiveness of his teaching. Those who make early and settled decisions concerning teacher preparation and who receive parental encouragement in their plans



to prepare for teaching are most apt to become successful teachers.

4. There is abundant evidence that low intelligence cannot be associated with the greatest degree of teacher success. On the other hand, extremely high intelligence may not always be an asset to a teacher, but of the two conditions the latter is to be desired. Students applying for admission to the curriculum in agricultural education should be of average or above average intelligence, if they are to become the most successful teachers of vocational agriculture.
5. The participation of the student in extra-curricular activities gives breadth of training and stimulates desirable leadership qualities. Students in agricultural education should all be encouraged to enter into extra-curricular activities. While participation in extra-curricular activities cannot be used alone to predict the success of a trainee in agricultural education, it is a commendable qualification when associated with other desirable factors.
6. Working one's way or borrowing money to go to college has its disadvantages and its advantages, but



for the agricultural education student the latter outweigh the former. For those who are able, it is more desirable to borrow a part of the needed funds than to devote a great amount of time to working while in college. Other things being equal, students who find it necessary to borrow or earn at least a part of their college expenses are the most promising prospective teachers of vocational agriculture.

7. Scholastic grade point averages, perhaps the one factor which has been used most frequently as a predictive measure of teaching success, are important. According to the importance of grades earned, groups of courses are ranged in the following order: professional courses in education, biological sciences, physical sciences, English, social sciences and technical agriculture. Scholastic achievement expressed in terms of grade point averages may be used in predicting success for teachers of vocational agriculture.
8. Scholastic failures, indicative of poor scholarship, are predictive of teacher success for trainees in vocational agriculture. They may reveal a lack of a mastery of fundamental subject matter to be taught, or

of an understanding of special teaching methods and classroom techniques. Failures in English reflect directly in the teacher's ability of expression and communication. The extent to which students fail undergraduate courses is a measure of their probable success as teachers of vocational agriculture.



130.

A P P E N D I C E S

## APPENDIX A

### Pre-Employment Records and Activities of Graduates in Agricultural Education

Underline or check ( ) when possible.

No. -----

Name-----Have taught vocational agriculture -- yrs.

If you have taught, how many years did you teach in each of the positions you have held:

1st position -- 2nd position -- 3rd position -- 4th position --  
5th position -- 6th position -- 7th position -- 8th position --

#### Elementary school:

1. Attended 1-room rural elementary school. No. of years ---
2. Attended 2-or more-room graded rural elementary school.  
No. of years ---
3. Attended rural elementary consolidated school No. of years --
4. Attended urban elementary school. No. of years ---
5. Attended other elementary school; e.g., private, parochial,  
etc. No. of years ---  
(Rural - any district under the jurisdiction of the county  
Supt. of Schools except boroughs have pop. of 2,500 or  
more.)

#### Secondary school:

1. Attended urban high schools -- yrs. Attended rural high  
school -- years.
2. Studied vocational agriculture in high school. Yes --  
No -- Years ---
3. List in order of importance extra class high school activi-  
ties in which you took part; e.g., football, dramatics,  
publications, etc. (1) \_\_\_\_\_ (2) \_\_\_\_\_ (3) \_\_\_\_\_

#### Attitudes toward your attendance at college:

1. Father's attitude toward college: favorable, indifferent,  
discouraging.
2. Mother's attitude toward college: favorable, indifferent,  
discouraging.
3. Your attitude toward attending college: enthusiastic,  
neutral, disinterested.



Vocations:

1. Father's occupation at the time you were growing up -----  
-----
2. Did you decide to prepare to be a teacher before  
entering college? ----- While in college? ----- After  
graduating from college? -----
3. Reasons for above decision in order of importance:  
(1) -----  
(2) -----  
(3) -----
4. If not now employed as teacher of vocational agriculture,  
what is your present occupation? -----
5. Other occupations you have pursued -----
6. If you formerly taught vocational agriculture, please  
state reasons for changing to present occupation -----  
-----

Farm experience:

1. Farm reared: Yes -- No--.
2. Average acres in home farm -----.
3. If not farm reared, where did you get practical farm  
experience? -----
4. Major farm enterprises on home farm listed in order of  
importance: (1) -----(2)----- (3)-----  
(4) -----
5. How many of the four summers immediately preceding college  
graduation did you spend on the farm? -----
6. Operated a farm prior to teaching vocational agriculture:  
Yes -- No -- Size of farm ----- Years operated -----

College extra-class activities:

1. Athletics - kind (1) -----No. of years -----  
(2) -----No. of years -----  
(3) -----No. of years -----
2. Fraternity membership: Social -----Professional--Honorary--
3. Class offices held:-----
4. Member of judging teams: -----
5. Other activities: -----

Manner of meeting college expenses:

1. Parents or others assumed all my expenses. -----
2. I borrowed funds: approximately  $\frac{1}{4}$ --.  $\frac{1}{2}$ --.  $\frac{3}{4}$ --, all expenses--
3. I worked my way: approximately  $\frac{1}{4}$ --.  $\frac{1}{2}$ --.  $\frac{3}{4}$ --, all expenses---
4. Did you have a scholarship? Yes --- No --- Kind -----



# APPENDIX B

## PRE-EMPLOYMENT RECORDS AND ACTIVITIES OF GRADUATES IN AGRICULTURAL EDUCATION

No. \_\_\_\_\_

I.Q. \_\_\_\_\_

Name:	Curriculum:	Year graduated
Father's occupation:	High school prepared	Index No.

### GRADE POINT AVERAGES

1. All under-graduate work -----
2. Required Physical Science group -----
3. Required Biological Science group -----
4. Required Social Science group -----
5. Required Technical Agriculture group -----
6. Required Professional group -----
7. Required English group -----

### FAILURES (-1 and -2)

Group	Course	Credit
Physical Science	1. _____	_____
	2. _____	_____
	3. _____	_____
Biological Science	1. _____	_____
	2. _____	_____
	3. _____	_____
Social Science	1. _____	_____
	2. _____	_____
Technical Agriculture	1. _____	_____
	2. _____	_____
Professional	1. _____	_____
	2. _____	_____
English	1. _____	_____
	2. _____	_____
	3. _____	_____

Times on probation ----- Graduated with honors -----



APPENDIX C

THE PENNSYLVANIA STATE COLLEGE  
SCHOOL OF AGRICULTURE AND EXPERIMENT STATION  
STATE COLLEGE, PA.

DEPARTMENT OF RURAL EDUCATION

May 10, 1932.

Dear Mr. \_\_\_\_\_

The Rural Education Department of The Pennsylvania State College is undertaking a comprehensive study of the college training and other pre-employment activities and records of men who have qualified to teach vocational agriculture. We desire information from those who are now teaching, from those who have taught but are not teaching at present, and from those who pursued teacher-training courses but have not entered the teaching field.

More than 400 men are on the list. You are one of the 400. A form for you to fill out is enclosed. Won't you please check it now and mail it to us in the stamped addressed envelope? The success of this study will depend upon the completeness and promptness of the replies.

Assuring you that your cooperation will be greatly appreciated.

Yours sincerely,

C. S. Anderson  
Associate Professor of  
Agricultural Education

T

THE PENNSYLVANIA STATE COLLEGE  
SCHOOL OF AGRICULTURE AND EXPERIMENT STATION  
STATE COLLEGE, PA.

DEPARTMENT OF RURAL EDUCATION

May 10, 1932

To County Vocational Supervisors:

Dear Mr: \_\_\_\_\_

You will recognize the enclosed questionnaire as a likeness to one which you filled out for me when you were attending the Conference for County Vocational Supervisors. As a result of this trial the form has been revised and is now being sent to all men concerned in the study.

The assistance which you rendered in the construction of the questionnaire and this contribution of your personal data are greatly appreciated. May we have the enclosed form filled out and returned at your earliest convenience?

Yours very truly,

C. S. Anderson  
Associate Professor of  
Agricultural Education

T



## APPENDIX D

### BIBLIOGRAPHY

- ALMACK, JOHN C., The Problem of Teacher Tenure. The American School Board Journal, Vol. LXIII, Nov., 1921.
- BARR, A. S., and EMANS, L. M., "What Qualities are Prerequisite to Success in Teaching?" Nations Schools, Vol. VI, No. 3, 1930, pp. 60-64.
- BATHURST, J. E., "Do Teachers Improve with Experience?" Personnel Journal, Vol. VII, 1929, pp. 54-57.
- BEATTY, J. D., and CLENTON, G. W., "Predicting Achievement in College and After Graduation," Personnel Journal, Vol. VI, 1928, pp. 344-351.
- CHARTERS, W. W., and WAPLES, DOUGLAS, The Commonwealth Teacher Training Study. Chicago: The University of Chicago Press, 1929.
- CLARK, R. C., "Qualities of a Successful Teacher," Education, Vol. L, December, 1929, pp. 248-254.
- COOPER, JOHN A., The Effect of Participation in Athletics Upon Scholarship Measured by Achievement Tests. Unpublished Master's Thesis. The Pennsylvania State College, 1931.
- DIAMOND, THOMAS, A Study of the Teachers of Industrial Arts and Industrial Education in The State of Michigan. Special Studies No. 3. University of Michigan, 1927.
- Federal Board for Vocational Education, Statement of Policies. Bulletin No. 1, Washington, D. C., 1922.
- Federal Board for Vocational Education, The Tenure of Agricultural Teachers in Mississippi, Monograph No. 4, Washington, D. C., 1923.
- HARMON, WELLINGTON, "Transient Teachers and Stepping Stones," Wisconsin Journal of Education, Vol. LXII, 1930, pp. 315-316.
- HERRIOTT, M. E., Attitudes as Factors of Scholastic Success. University of Illinois Bulletin, Vol. XXVII, No. 2, Bureau of Educational Research Bulletin, No. 47, Urbana: University of Illinois, 1929.
- KNIGHT, F. E., Qualities Related to Success in Teaching. Teachers College, Columbia University, Contributions to Education, No. 120. New York: Bureau of Publications, Columbia University, 1922.
- KRINER, HARRY L., Pre-Training Factors Predictive of Teacher Success, Penn State Studies in Education No. 1. The Pennsylvania State College, State College, Pa., 1931.
- LINTON, CLARENCE, A Study of Some Problems Arising in the Admission of Students as Candidates for Professional Degrees in Education, Teachers College, Columbia University, Contributions to Education, No. 285, New York: Bureau of Publications, Columbia University, 1927.



- MADSEN, I. H., "The Prediction of Teaching Success," Educational Administration and Supervision, Vol. XIII, 1928, pp. 30-47.
- MAREWELL, R. S., Is Long Tenure of Service for Teachers Desirable? Kansas Teachers, Vol. XXXII, Dec., 1930.
- MERIAM, J. L., Normal School Education and Efficiency in Teaching. Teachers College, Columbia University, Contributions to Education, No. 1. New York: Bureau of Publications, Columbia University, 1906.
- MORRIS, ELIZABETH H., Personal Traits and Success in Teaching. Teachers College, Columbia University, Contributions to Education, No. 342. New York: Bureau of Publications, Columbia University, 1929.
- PYLE, W. H., "The Relation Between Intelligence and Teaching Success," Educational Administration and Supervision Vol. XIV, 1928, pp. 257-267.
- RICE, RALPH S., A Comparison of Consolidated Schools and One-Room Rural Schools. Unpublished Master's Thesis. The Pennsylvania State College, 1930.
- SOMERS, G. T., Pedagogical Prognosis. Teachers College, Columbia University, Contributions to Education, No. 140. New York: Bureau of Publications, Columbia University, 1923.
- SORENSEN, HERBERT, "Why Teaching Success Does Not Correlate Highly with Measured Intelligence," Educational Administration and Supervision, Vol. XV, 1929, pp. 602-606.
- STEWART, A. W., A Comparison of the Work Done at The Pennsylvania State College by Rural High School Students with That Done by Students from Urban High Schools. Unpublished Master's Thesis. The Pennsylvania State College, 1930.
- STEWART, R. M., and GETMAN, A. K., Teaching Agricultural Vocations. New York: John Wiley & Sons, 1927.
- TIEG, ERNEST W., An Evolution of Some Techniques of Teacher Selection. Bloomington: The Public School Publishing Co., 1928.
- ULIMAN, R. R., The Prognostic Value of Certain Factors Related to Teaching Success. Ashland, O.: A. L. Garber Co., 1931.
- WALLER, JESSE C., Tenure and Transiency of Teachers in Kentucky. Contributions to Education of George Peabody College for Teachers, No. 60, Nashville, Tenn., 1929.
- WHITNEY, F. L., The Prediction of Teaching Success. Journal of Educational Research Monographs, No. 6. Bloomington: Public School Publishing Co., 1924.



**End of  
Title**